Florida Department of Education

CTE Curriculum Frameworks

Health Science

Rule 6A-6.0571, F.A.C.
Effective January 2027 ~~June 2026~~

Florida Department of Education
Curriculum Framework

No new students may be enrolled in this program starting 2026-27. The last year to report any enrollment is 2026-27. This program can be substituted with Mentored Industry Project 9601200 (1032011101) or School-Based Enterprise 9601300 (1052070100).

Course Title: **Health Science Directed Study**
Career Cluster: **Health Science Cluster**

Secondary – Career Preparatory	
Course Number	8400100
CIP Number	0317999910
Grade Level	11-12
Course Length	Multiple credits
Teacher Certification	Refer to the **Course Structure** section.
CTSO	HOSA
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml

Purpose

The purpose of this course is to provide students with learning opportunities in a prescribed program of study within the Health Science cluster that will enhance opportunities for employment in the career field chosen by the student.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Course Structure

The content is prescribed by the instructor based upon the individual student's assessed needs for directed study.

This course may be taken only by a student who has completed or is currently completing a specific secondary job preparatory program or occupational completion point for additional study in this career cluster. Students need to have taken the Health Science Core before enrolling in this course. A student may earn multiple credits in this course.

The selected standards and benchmarks, which the student must master to earn credit, must be outlined in an instructional plan developed by the instructor.

To teach the course listed below, instructors must hold at least one of the teacher certifications indicated for that course.

The following table illustrates the secondary course structure:

Course Number	Course Title	Teacher Certification	Length	Level	Graduation Requirement
8400100	Health Science Directed Study	ANY HEALTH OCCUP G *(See DOE approved list)	Multiple credits	2	CT

(Graduation Requirement Codes: CT= Career & Technical Education, EQ= Equally Rigorous Science, EC= Economics, MA= Mathematics, PL= Personal Financial Literacy)

Florida's Career Readiness Skills for CTE Programs

Employability Skills	
01.0	Apply academic skills to workplace scenarios.
01.01	Use reading skills.
01.02	Use writing skills.
01.03	Use mathematical strategies and procedures.
01.04	Use scientific principles and procedures.
02.0	Design a solution to an industry problem.
02.01	Use critical thinking.
02.02	Use creativity.
02.03	Make sound decisions.
02.04	Solve problems.
02.05	Reason.
02.06	Plan and organize.
03.0	Manage resources within an industry project
03.01	Manage time.
03.02	Manage money or resources.
03.03	Manage materials.
03.04	Manage personnel.
04.0	Oversee the subcomponents, operations and output of a technical or organizational system.
04.01	Manage systems.
04.02	Monitor systems.
04.03	Improve systems.
05.0	Use information for decision making.
05.01	Locate information.
05.02	Organize information.
05.03	Use information.

	05.04 Analyze information.
	05.05 Communicate information.
06.0	Apply relevant technology to workplace scenarios to aid productivity.
	06.01 Use technology.
07.0	Interpret and express interpersonal communication.
	07.01 Communicate verbally.
	07.02 Listen actively.
	07.03 Comprehend written material.
	07.04 Convey information in writing.
	07.05 Communicate nonverbally.
	07.06 Interpret nonverbal communication.
08.0	Interact with others to accomplish workplace goals.
	08.01 Collaborate with others in a team.
	08.02 Respond to customer needs.
	08.03 Exercise leadership.
	08.04 Negotiate to resolve conflict.
	08.05 Respect others.
09.0	Manage personal behavior to maximize productivity and professional growth.
	09.01 Demonstrate responsibility and self-discipline.
	09.02 Adapt and show flexibility.
	09.03 Work independently.
	09.04 Demonstrate a willingness to learn.
	09.05 Demonstrate integrity.
	09.06 Demonstrate professionalism.
	09.07 Take initiative.
	09.08 Display positive attitude.
	09.09 Take responsibility for professional growth.

Career Exploration & Planning	
10.0	Explain career opportunities aligned with the regional economy and personal aspirations.
10.01	Describe regional occupations that are high-demand, high-growth, high-wage and/or high-skill.
10.02	Describe careers aligned with his or her interests, skills and values based on career assessment, experiential learning, career informational interviews, research and/or reflection.
11.0	Explain postsecondary pathways aligned with his or her career aspirations.
11.01	Compare and contrast postsecondary pathways, including education, employment, entrepreneurship and enlistment (the “Four Es”).
11.02	Compare and contrast regional postsecondary training provider options, including apprenticeships, technical colleges, state colleges, universities and industry-recognized certification providers.
11.03	Define postsecondary credentialing and stacking options, including industry-recognized certifications, apprenticeship certificates of completion, career certificates, licenses and associate or baccalaureate degrees.
11.04	Compare postsecondary training data for training programs of interest, such as total costs, average student loan debt, and median earnings and job placement rates after program completion.
12.0	Develop a personalized career and academic plan.
12.01	Prioritize an occupation, credential and postsecondary training provider for plan formation.
12.02	Self-assess progress toward meeting graduation requirements and skill-development goals.
12.03	Develop and complete a chronological checklist of steps and deadlines prior to postsecondary training or national service application that includes any required documentation to gather, writing prompts and examinations.
12.04	Identify a variety of financial aid opportunities, including scholarships, grants, savings, work, work-study programs, private loans and federal loans.
12.05	Develop a postsecondary training budget that is inclusive of living and school expenses.
Job Attainment	
13.0	Find, assess and apply to job opportunities.
13.01	Identify online job posts relevant to his or her career aspirations.
13.02	Compare and contrast the job posts’ required qualifications, job duties, compensation, benefits and employers.
13.03	Define what information, documentation and writing prompts are required for the positions.
14.0	Communicate personal competence, character and fit for a job opportunity.
14.01	Develop a resume.
14.02	Write a cover letter.
14.03	Curate a professional portfolio that includes work products.
14.04	Prepare for and experience a mock job interview.

15.0	Cultivate and leverage relationships to professionally advance.
	15.01 Request a signed reference letter, letter of recommendation and/or an online skill/professionalism endorsement.
	15.02 Develop a plan to cultivate a professional digital footprint.
	15.03 Develop a networking plan for a specific industry of interest.

Standards

After successfully completing this program, the student will be able to perform the following:

01.0 Demonstrate mastery in a specific occupation within the career cluster.
02.0 Conduct investigative research demonstrating an understanding of the career and skills within the career using approved research methodology, interpret findings, and prepare presentations to defend results.
03.0 Apply enhanced leadership and professional career skills.
04.0 Demonstrate higher-order critical thinking and reasoning skills appropriate for the selected health study.

Florida Department of Education
Student Performance Standards

Course Title: **Health Science Directed Study**
Course Number: **8400100**
Course Credit: **Multiple Credits**

CTE Standards and Benchmarks	
01.0	Demonstrate mastery in a specific occupation within the career cluster. The student will be able to:
01.01	The benchmarks will be selected from the appropriate curriculum frameworks and determined by the instructor based upon the individual students' current health science needs.
02.0	Conduct investigative research demonstrating an understanding of the career and skills within the career using approved research methodology, interpret findings, and prepare presentations to defend results. The student will be able to:
02.01	Select investigative study referencing prior research and knowledge.
02.02	Collect, organize, and analyze data accurately and precisely.
02.03	Design procedures to support the research or contact knowledgeable professionals to confirm researched data.
02.04	Develop, display, and defend the results of investigations to audiences that may include professionals and technical experts.
03.0	Apply enhanced leadership and professional career skills. The student will be able to:
03.01	Create an education plan to further career goals.
03.02	Enhance leadership and career skills through work-based learning including job placement, job shadowing, entrepreneurship, internship, or a virtual experience.
03.03	Participate in leadership development opportunities available through the appropriate student organization and/or other professional organizations. Research potential educational opportunities to develop and further ever-changing healthcare knowledge.
03.04	Enhance soft skills through the development of presentations, public speaking, and live and/or virtual interviews. Learn proper oral reporting and written documentation related to healthcare.
04.0	Demonstrate higher-order critical thinking and reasoning skills appropriate for the selected health study. The student will be able to:
04.01	Apply problem solving and prioritizing skills encountered in the Health Care occupation.
04.02	Read and interpret information relative to the chosen occupation.
04.03	Locate and evaluate key elements of oral and written information, differentiating between subjective and objective data.
04.04	Analyze and apply data and/or measurements to justify and explain to others.
04.05	Understand chain of command, or organized structure within the Health Care system, and parameters for abiding by HIPAA guidelines.

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as, experimental, quality, and safety procedures are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate and troubleshoot equipment/tools used to make observations. Students understand measurement error; and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

Career and Technical Student Organization (CTSO)

CTSOs are co-curricular career and technical student organizations providing leadership training and reinforcing specific career and technical skills. Career and Technical Student Organizations provide activities for students as an integral part of the instruction offered. Other CTSOs not listed in this curriculum framework or recognized by the Florida Department of Education are permissible provided they support student mastery over the standards and benchmarks of this curriculum framework.

Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities as identified on the secondary student's Individual Educational Plan (IEP) or 504 plan or postsecondary student's accommodations' plan to meet individual needs and ensure equal access. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

In addition to accommodations, some secondary students with disabilities (students with an IEP served in Exceptional Student Education (ESE)) will need modifications to meet their needs. Modifications change the outcomes or what the student is expected to learn, e.g., modifying the curriculum of a secondary career and technical education course. Note: postsecondary curriculum and regulated secondary programs cannot be modified.

Some secondary students with disabilities (ESE) may need additional time (i.e., longer than the regular school year), to master the student performance standards associated with a regular course or a modified course. If needed, a student may enroll in the same career and technical course more than once. Documentation should be included in the IEP that clearly indicates that it is anticipated that the student may need an additional year to complete a Career and Technical Education (CTE) course. The student should work on different competencies and new applications of competencies each year toward completion of the CTE course. After achieving the competencies identified for the year, the student earns credit for the course. It is important to ensure that credits earned by students are reported accurately. The district's information system must be designed to accept multiple credits for the same course number for eligible students with disabilities.

Florida Department of Education
Curriculum Framework

Course Title: **Orientation to Health Science Professions**
Course Type: **Orientation/Exploratory**
Career Cluster: **Health Science**

Secondary – Middle School	
Course Number	8400110
CIP Number	03179999OR
Grade Level	6-8
Course Length	Semester
Teacher Certification	Refer to the **Course Structure** section.
CTSO	HOSA
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml

Purpose

The purpose of this course is to assist students in making informed decisions regarding their future academic and occupational goals and to provide information regarding careers in the Health Science career cluster. The content includes but is not limited to basic information about the kinds of jobs and workers involved the various career paths, financial rewards, occupational hazards, and educational requirements. Information concerning the practices for promoting good health is included.

Instruction and learning activities are provided in a laboratory setting using hands-on experiences with the equipment, materials and technology appropriate to the course content and in accordance with current practices.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Course Structure

This program is a planned sequence of instruction consisting of 1 course.

The length of this course is one semester. It may be offered for two semesters when appropriate. When offered for one semester, it is recommended that it be at the exploratory level and more in-depth when offered for two semesters.

To teach the course listed below, instructors must hold at least one of the teacher certifications indicated for that course.

The following table illustrates the course structure:

Course Number	Course Title	Teacher Certification	Length
8400110	Orientation to Health Science Professions	ANY HEALTH OCCUP G * (See DOE approved list) HEALTH 6	Semester

Standards

After successfully completing this program, the student will be able to perform the following:

01.0 Recognize progress in health care service.
02.0 Demonstrate an awareness of health careers and related employability skills.
03.0 Recognize basic communication skills in the healthcare setting.
04.0 Perform basic mathematical calculations and demonstrate problem solving skills used by the health care worker.
05.0 Demonstrate an understanding of principles of wellness and disease.
06.0 Perform basic health care skills.
07.0 Demonstrate occupational safety skills related to the employer, employee and the patient in the healthcare setting.

Florida Department of Education
Student Performance Standards

Course Title: **Orientation to Health Science Professions**
Course Number: **8400110**
Course Length: **Semester**

CTE Standards and Benchmarks	
01.0	Recognize progress in health care service. The student will be able to:
01.01	Compare medical progress from ancient times to the present. For example: surgical techniques, anesthesia, treatment and equipment.
01.02	Discuss health care leaders who brought about change and progress from ancient times to the present. For example: Hippocrates, Edward Jenner, Joseph Lister, Alexander Fleming, Marie Curie, and Clara Barton.
01.03	Demonstrate knowledge of how advances in science have impacted beliefs and practices from ancient times to the present.
02.0	Demonstrate an awareness of health careers and related employability skills. The student will be able to:
02.01	Complete a career inventory to match student interest with potential healthcare careers.
02.02	List employability/soft skills and characteristics needed to be successful in the workplace. For Example: punctuality, dependability, and communication skills.
02.03	Identify the characteristics of healthcare professionals.
02.04	Identify several professions in each of the Health Science Career Pathways: Therapeutic Services, Diagnostic Services, Health Informatics, Support Services, Bio-technology Research and Development.
02.05	List the advantages and disadvantages of one occupation in each pathway including the following factors; job description, career pathway/area of interest, and salary range.
03.0	Recognize basic communication skills in the healthcare setting. The student will be able to:
03.01	Demonstrate an understanding of interpersonal communication skills such as active listening, verbal, non-verbal and written language.
03.02	Demonstrate the ability to break medical terms into their word parts.
03.03	Discuss common abbreviations and symbols used in healthcare professions.
03.04	Identify technology used for communication in healthcare professions and proper etiquette for its' use.
04.0	Perform basic mathematical calculations and demonstrate problem solving skills used by the health care worker. The student will be able to:

CTE Standards and Benchmarks	
	04.01 Describe the importance of why accurate calculations and effective problem solving skills are required.
	04.02 Calculate mathematical problems and measurements related to health care.
	04.03 Convert common weights, measure, and volumes to metric as applied in the health care setting.
	04.04 Accurately tell time using both standard and international/military time formats.
05.0	Demonstrate an understanding of principles of wellness and disease. The student will be able to:
	05.01 Describe how cultural and individual differences relate to wellness and quality of life and how these differences impact health problems of society.
	05.02 Demonstrate an understanding of the risk factors that contribute to illness.
	05.03 Identify consequences of substance abuse and high risk behaviors.
	05.04 Describe strategies for prevention of diseases including health screenings and examinations.
	05.05 Explain basic concepts of positive self-image, body and mental wellness and the effect stress has on both.
	05.06 Explore the need for proper nutrition and water intake to maintain wellness.
06.0	Perform basic health care skills. The student will be able to:
	06.01 Measure and record (graph) height and weight.
	06.02 Measure and record temperature, pulse, and respiration (TPR).
	06.03 Demonstrate medical aseptic technique by using proper hand washing skills.
	06.04 Demonstrate hands-only CPR.
07.0	Demonstrate occupational safety skills related to the employer, employee and the patient in the healthcare setting. The student will be able to:
	07.01 Recognize safety concerns related to the practice of health care.
	07.02 Demonstrate an understanding for the importance of fire safety practices including prevention, evacuation plans (R.A.C.E.) and the use of a fire extinguisher (P.A.S.S.).
	07.03 Demonstrate safety habits that will prevent injury to health care workers, co-workers, and patients including proper use personal protective equipment (PPE) and infection control practices.

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as, experimental, quality, and safety procedures are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate and troubleshoot equipment/tools used to make observations. Students understand measurement error; and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

Florida Standards for English Language Development (ELD)

English language learners communicate for social and instructional purposes within the school setting. ELD.K12.ELL.SI.1

English Language Development (ELD) Standards Special Notes:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. For additional information on the development and implementation of the ELD standards, please contact the Bureau of Student Achievement through Language Acquisition at SALA@fldoe.org.

Special Notes

The intended progression for the Health Science Middle School courses is Introduction to Health Science Career Pathways (8709350 & 8709360), Orientation to Health Science Professions (8400110) and Exploration of Health Science Professions (8400310 & 8400210). By offering the middle school courses in the intended progression, each course increases in complexity, rigor and skill level as appropriate.

Special projects that are related to occupational clusters are provided, including making dental molds, designing eye glasses, fingerprinting, and role playing activities of daily living as a handicapped individual, developing an emergency evacuation plan for their own home, menu planning, and visualizing x-rays. Team teaching and integration of the curriculum with English, Math and Science is encouraged.
Guest speakers from industry make an important contribution to the effectiveness of this course.

Career and Technical Student Organization (CTSO)

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Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities as identified on the secondary student's Individual Educational Plan (IEP) or 504 plan or postsecondary student's accommodations' plan to meet individual needs and ensure equal access. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

In addition to accommodations, some secondary students with disabilities (students with an IEP served in Exceptional Student Education (ESE)) will need modifications to meet their needs. Modifications change the outcomes or what the student is expected to learn, e.g., modifying the curriculum of a secondary career and technical education course. Note: postsecondary curriculum and regulated secondary programs cannot be modified.

Florida Department of Education
Curriculum Framework

Course Title: **Exploration of Health Science Professions and Career Planning**
Course Type: **Orientation/Exploratory and Career Planning**
Career Cluster: **Health Science**

Secondary – Middle School	
Course Number	8400210
CIP Number	03179999CE
Grade Level	6-8
Course Length	Semester
Teacher Certification	Refer to the **Course Structure** section.
CTSO	HOSA
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml

Purpose

The purpose of this course is to assist students in making informed decisions regarding their future academic and occupational goals and to provide information regarding careers in the Health Science career cluster. The content includes but is not limited to exploratory activities relating to all health occupational clusters. The course also includes an introduction to medical ethics, consumerism, and characteristics of health care workers, community health agencies and basic computer literacy.

Instruction and learning activities are provided in a laboratory setting using hands-on experiences with the equipment, materials and technology appropriate to the course content and in accordance with current practices.

The purpose of this course is to give students initial exposure to the skills and attitudes associated with a broad range of occupations relating to careers in health, including job requirements and tasks performed, to assist students in making informed decisions regarding their future academic and occupational goals.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Course Structure

This program is a planned sequence of instruction consisting of 1 course.

The length of this course is one semester. It may be offered for two semesters when appropriate. When offered for one semester, it is recommended that it be at the exploratory level and more in-depth when offered for two semesters.

To teach the course listed below, instructors must hold at least one of the teacher certifications indicated for that course.

The following table illustrates the course/program structure:

Course Number	Course Title	Teacher Certification	Length
8400210	Exploration of Health Science Professions and Career Planning	ANY HEALTH OCCUP G * (See DOE approved list) FAM CON SC 1 HEALTH 6 Any Field When Certificate Reflects Bachelor's Degree or Higher	Semester

Standards

After successfully completing this program, the student will be able to perform the following:

01.0 Demonstrate a well-rounded understanding of healthcare professions.
02.0 Demonstrate an understanding of the importance of legal and ethical behavior related to health care.
03.0 Perform basic communication skills in the healthcare setting.
04.0 Perform basic mathematical calculations and demonstrate problem solving skills used by the health care worker.
05.0 Apply scientific principles to the health care field.
06.0 Perform basic health care skills.
07.0 Demonstrate occupational safety skills related to the employer, employee and the patient in the healthcare setting.

Career and Education Planning [these must be met to satisfy the requirements of Section 1003.4156, Florida Statutes.

08.0 Explain his or her career interests, skills and values.
09.0 Describe occupations and industries in his or her region.
10.0 Describe a variety of postsecondary pathways.
11.0 Describe a variety of postsecondary pathways.

Florida Department of Education
Student Performance Standards

Course Title: **Exploration of Health Science Professions and Career Planning**
Course Number: **8400210**
Course Length: **Semester**

CTE Standards and Benchmarks	
01.0	Demonstrate a well-rounded understanding of healthcare professions. The student will be able to:
01.01	Explore the major scientific advancements that have contributed to the evolution of healthcare.
01.02	Research contributions made in the field of medical science and their impact on the health care field.
01.03	Identify types of education and training levels (OJT, HSTE, AA, BS/BA, MS, and Doctoral) as related to health careers.
01.04	Compare and contrast the health science career pathways: Therapeutic Services, Diagnostic Services, Health Informatics, Support Services, Bio-technology Research and Development.
01.05	List the advantages and disadvantages of one occupation in each pathway including the following factors; job description, career pathway/area of interest, salary range, educational requirements, and job outlook.
01.06	Research and describe a healthcare profession of interest identified through a career inventory assessment.
02.0	Demonstrate an understanding of the importance of legal and ethical behavior related to health care. The student will be able to:
02.01	Identify responsibilities in maintaining ethical standards, confidentiality, and the patient's rights.
02.02	Identify and define terms related to the legal and ethical aspects of the health care industry. For example: malpractice, negligence, invasion of privacy, quackery, ethics and law, Patients' Bill of Rights, licensure.
03.0	Perform basic communication skills in the healthcare setting. The student will be able to:
03.01	Demonstrate interpersonal communication skills such as active listening, verbal, non-verbal and written language in the health care setting.
03.02	Identify technology used for communication in healthcare professions and proper etiquette for its' use.
03.03	Demonstrate use of medical terminology and abbreviations associated with healthcare professions.
04.0	Perform basic mathematical calculations and demonstrate problem solving skills used by the health care worker. The student will be able to:
04.01	Analyze case studies or current events where adverse consequences resulted from mathematical medical error.
04.02	Convert common weights, measure, and volumes to metric as applied in the health care setting.

CTE Standards and Benchmarks	
	04.03 Accurately identify and perform appropriate numeric procedures with problems found in numeric, symbolic, or word form as they relate to the occupations.
	04.04 Accurately tell time using both standard and international/military time formats.
05.0	Apply scientific principles to the health care field. The student will be able to:
	05.01 Identify the overall organization of the human body.
	05.02 Describe the basic structure and function of the body systems of the human body.
	05.03 Describe how the systems of the human body work together to maintain homeostasis.
	05.04 Describe mechanisms of disease transmission, the Chain of Infection, prevention, and standard precautions.
06.0	Perform basic health care skills. The student will be able to:
	06.01 Measure and record (graph) height and weight.
	06.02 Measure and record temperature, pulse, blood pressure, and respiration while recognizing the normal ranges for each.
	06.03 Demonstrate medical aseptic technique by hand washing, gloving and application of personal protective equipment (PPE).
	06.04 Demonstrate basic first aid skills (i.e., bleeding, fractures, and musculoskeletal emergencies).
	06.05 Demonstrate Cardiopulmonary Resuscitation (CPR) and care for a choking victim.
	06.06 Demonstrate basic skills used within the healthcare professions may include the following: • Visualizing X-rays • Conduct vision testing (Snellen chart, peripheral vision, color blindness) • Conduct basic hearing test • Measure respiratory capacity/output • Range-of-Motion exercises • Conduct simulated ABO blood-typing
07.0	Demonstrate occupational safety skills related to the employer, employee and the patient in the healthcare setting. The student will be able to:
	07.01 Recognize safety concerns related to the practice of health care.
	07.02 Demonstrate safety habits that will prevent injury to health care workers, co-workers, and patients including proper use personal protective equipment (PPE) and infection control practices.
	07.03 Identify poisons and hazardous materials to include the use and interpretation of a Safety Data Sheet (SDS) form.

CTE Standards and Benchmarks
07.04 Demonstrate an understanding for the importance of fire safety practices including prevention, evacuation plans (R.A.C.E.) and the use of a fire extinguisher (P.A.S.S.).
07.05 Explore basic information on the dangers of blood borne diseases in healthcare including but not limited to HIV/AIDS and Hepatitis B.
07.06 Perform proper body mechanics to prevent self and patient injuries.

<u>Career and Education Planning</u> [these must be met to satisfy the requirements of Section 1003.4156, Florida Statutes]

Standards and Benchmarks
8.0 Explain his or her career interests, skills and values. The student will be able to:
8.01 Describe his or her career interests based on a career interest assessment, personal experience, career informational interviews, research and/or reflection.
8.02 Describe what career-related skills are his or her current strengths or could become strengths in the future with practice and training based on a career skill assessment, personal experience and/or reflection.
8.03 Describe what lifestyle and workplace values are most important to them to consider during career decision making, such as salary and benefits, work environment, the nature of the work and work/life balance.
8.04 Describe what values that relate to positively impacting others and the world are most important to them to weigh during career decision making.
9.0 Describe occupations and industries in his or her region. The student will be able to:
9.01 Define Career Clusters, industries and occupations.
9.02 Define regional poverty, average and family-sustaining wage thresholds.
9.03 Review local labor market data to identify the top five regional occupations as relates to each of the following: employment, growth and salary.
9.04 List three occupations that align with his or her personal career interests, skills and values.
9.05 List the regional salary, employment and growth of three occupations they are most interested in learning more about.
9.06 Summarize occupational content learned through a career informational interview, career fair, job shadowing, service learning, guest speaker, project-based learning, work-based learning, worksite visit or other firsthand experience.
10.0 Describe a variety of postsecondary pathways. The student will be able to:
10.01 Evaluate the pros and cons of pursuing education, employment, entrepreneurship or enlistment immediately following high school.
10.02 Define postsecondary training provider options and their admissions requirements, including apprenticeships, technical colleges, state or community colleges, universities and industry-recognized certification providers.
10.03 Define postsecondary credentialing and stacking options, including industry-recognized certifications, apprenticeship certificates of completion, career certificates, licenses and associate or baccalaureate degrees

	10.04 Explain training options aligned with his or her career assessment results and occupational exploration.
	10.05 Review postsecondary training data and list the total cost, average debt after graduation and median earnings and job placement rates of students who completed the student's preferred postsecondary training option.
	10.06 Summarize what they learned about his or her preferred postsecondary training provider through online research; virtual or in-person tours; a college fair; and/or interviewing a current student, alumni or staff member.
11.0	Create a personalized career and academic plan. The student will be able to:
	11.01 Prioritize an occupation for plan formation using one or more decision making techniques, such as a decision matrix, pros and cons analysis or other means
	11.02 Explain the reasoning for choosing to pursue his or her preferred occupation
	11.03 Identify which credentials, technical skills, and employability or entrepreneurship skills are relevant to his or her preferred career pathway.
	11.04 Prioritize a recognized postsecondary credential (industry-recognized certifications, apprenticeship certificates of completion, career certificates, licenses and associate or baccalaureate degrees) aligned with his or her chosen occupation using a decision-making technique, such as a decision matrix and/or pros and cons analysis, etc.
	11.05 Prioritize a postsecondary training provider aligned with his or her recognized postsecondary credential goal using a decision-making technique, such as a decision matrix and/or pros and cons analysis, etc.
	11.06 Define means of paying for postsecondary training, including scholarships (must include State scholarships), grants, savings, work, work-study programs, private loans and Federal loans.
	11.07 Describe ways of meeting the requirements of Florida's graduation pathways and obtaining accelerated credit, work-based learning experience, career and technical education credit and industry-recognized certifications in high school.
	11.08 Develop a freshman year course schedule that meets high school graduation requirements and that provides academic and career preparation aligned with the student's career goals.
	11.09 Identify extracurricular activities aligned with his or her occupational and postsecondary training goals.

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as, experimental, quality, and safety procedures are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate and troubleshoot equipment/tools used to make observations. Students understand measurement error; and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

Florida Standards for English Language Development (ELD)

English language learners communicate for social and instructional purposes within the school setting. ELD.K12.ELL.SI.1

English Language Development (ELD) Standards Special Notes:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. For additional information on the development and implementation of the ELD standards, please contact the Bureau of Student Achievement through Language Acquisition at sala@fldoe.org.

Special Notes

The intended progression for the Health Science Middle School courses is Introduction to Health Science Career Pathways (8709350 & 8709360), Orientation to Health Science Professions (8400110) and Exploration of Health Science Professions (8400310 & 8400210). By offering the middle school courses in the intended progression, each course increases in complexity, rigor and skill level as appropriate.

Special projects that are related to each occupational cluster are provided, including role playing activities related to specific careers, visualizing x-rays and crutch-walking, operating the microscope, and specific lab procedures. Team teaching and integration of the curriculum with English, Math and Science is encouraged.

Guest speakers from industry and related field trips make important contributions to the effectiveness of this course.

Career Planning

Effective July 1, 2019, per Section 1003.4156, Florida Statutes (F.S.), for students to meet middle grades promotion requirements, a Career and Education Planning course must be completed in either sixth, seventh, or eighth grade. These courses should be taught integrating the eight career and education planning course standards.

Career and Technical Student Organization (CTSO)

CTSOs are co-curricular career and technical student organizations providing leadership training and reinforcing specific career and technical skills. Career and Technical Student Organizations provide activities for students as an integral part of the instruction offered. Other CTSOs not listed in this curriculum framework or recognized by the Florida Department of Education are permissible provided they support student mastery over the standards and benchmarks of this curriculum framework.

Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities as identified on the secondary student's Individual Educational Plan (IEP) or 504 plan or postsecondary student's accommodations' plan to meet individual needs and ensure equal access. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

In addition to accommodations, some secondary students with disabilities (students with an IEP served in Exceptional Student Education (ESE)) will need modifications to meet their needs. Modifications change the outcomes or what the student is expected to learn, e.g., modifying the curriculum of a secondary career and technical education course. Note: postsecondary curriculum and regulated secondary programs cannot be modified.

Florida Department of Education
Curriculum Framework

Course Title: **Exploration of Health Science Professions**
Course Type: **Orientation/Exploratory**
Career Cluster: **Health Science**

Secondary – Middle School	
Course Number	8400310
CIP Number	03179999EX
Grade Level	6-8
Course Length	Semester
Teacher Certification	Refer to the **Course Structure** section.
CTSO	HOSA
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml

Purpose

The purpose of this course is to assist students in making informed decisions regarding their future academic and occupational goals and to provide information regarding careers in the Health Science career cluster. The content includes but is not limited to exploratory activities relating to all health occupational clusters. The course also includes an introduction to medical ethics, consumerism, and characteristics of health care workers, community health agencies and basic computer literacy.

Instruction and learning activities are provided in a laboratory setting using hands-on experiences with the equipment, materials and technology appropriate to the course content and in accordance with current practices.

The purpose of this course is to give students initial exposure to the skills and attitudes associated with a broad range of occupations relating to careers in health, including job requirements and tasks performed, to assist students in making informed decisions regarding their future academic and occupational goals.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Course Structure

This program is a planned sequence of instruction consisting of 1 course.

The length of this course is one semester. It may be offered for two semesters when appropriate. When offered for one semester, it is recommended that it be at the exploratory level and more in-depth when offered for two semesters.

To teach the course listed below, instructors must hold at least one of the teacher certifications indicated for that course.

The following table illustrates the course/program structure:

Course Number	Course Title	Teacher Certification	Length
8400310	Exploration of Health Science Professions	ANY HEALTH OCCUP G * (See DOE approved list) FAM CON SC 1 HEALTH 6 Any Field When Certificate Reflects Bachelor's Degree or Higher	Semester

Standards

After successfully completing this program, the student will be able to perform the following:

01.0 Demonstrate a well-rounded understanding of healthcare professions.
02.0 Demonstrate an understanding of the importance of legal and ethical behavior related to health care.
03.0 Perform basic communication skills in the healthcare setting.
04.0 Perform basic mathematical calculations and demonstrate problem solving skills used by the health care worker.
05.0 Apply scientific principles to the health care field.
06.0 Perform basic health care skills.
07.0 Demonstrate occupational safety skills related to the employer, employee and the patient in the healthcare setting.

Florida Department of Education
Student Performance Standards

Course Title: **Exploration of Health Science Professions**
Course Number: **8400310**
Course Length: **Semester**

CTE Standards and Benchmarks	
01.0	Demonstrate a well-rounded understanding of healthcare professions. The student will be able to:
01.01	Explore the major scientific advancements that have contributed to the evolution of healthcare.
01.02	Research contributions made in the field of medical science and their impact on the health care field.
01.03	Identify types of education and training levels (OJT, HSTE, AA, BS/BA, MS, and Doctoral) as related to health careers.
01.04	Compare and contrast the health science career pathways: Therapeutic Services, Diagnostic Services, Health Informatics, Support Services, Bio-technology Research and Development.
01.05	List the advantages and disadvantages of one occupation in each pathway including the following factors; job description, career pathway/area of interest, salary range, educational requirements and job outlook.
01.06	Research and describe a healthcare profession of interest identified through a career inventory assessment.
02.0	Demonstrate an understanding of the importance of legal and ethical behavior related to health care. The student will be able to:
02.01	Identify responsibilities in maintaining ethical standards, confidentiality, and the patient's rights.
02.02	Identify and define terms related to the legal and ethical aspects of the health care industry. For example: malpractice, negligence, invasion of privacy, quackery, ethics and law, Patients' Bill of Rights, licensure.
03.0	Perform basic communication skills in the healthcare setting. The student will be able to:
03.01	Demonstrate interpersonal communication skills such as active listening, verbal, non-verbal and written language in the health care setting.
03.02	Identify technology used for communication in healthcare professions and proper etiquette for its' use.
03.03	Demonstrate use of medical terminology and abbreviations associated with healthcare professions.
04.0	Perform basic mathematical calculations and demonstrate problem solving skills used by the health care worker. The student will be able to:
04.01	Analyze case studies or current events where adverse consequences resulted from mathematical medical error.
04.02	Convert common weights, measure, and volumes to metric as applied in the health care setting.

CTE Standards and Benchmarks	
	04.03 Accurately identify and perform appropriate numeric procedures with problems found in numeric, symbolic, or word form as they relate to the occupations.
	04.04 Accurately tell time using both standard and international/military time formats.
05.0	Apply scientific principles to the health care field. The student will be able to:
	05.01 Identify the overall organization of the human body.
	05.02 Describe the basic structure and function of the body systems of the human body.
	05.03 Describe how the systems of the human body work together to maintain homeostasis.
	05.04 Describe mechanisms of disease transmission, the Chain of Infection, prevention and standard precautions.
06.0	Perform basic health care skills. The student will be able to:
	06.01 Measure and record (graph) height and weight.
	06.02 Measure and record temperature, pulse, blood pressure and respiration while recognizing the normal ranges for each.
	06.03 Demonstrate medical aseptic technique by hand washing, gloving and application of personal protective equipment (PPE).
	06.04 Demonstrate basic first aid skills (i.e., bleeding, fractures, and musculoskeletal emergencies).
	06.05 Demonstrate Cardiopulmonary Resuscitation (CPR) and care for a choking victim.
	06.06 Demonstrate basic skills used within the healthcare professions may include the following: • Visualizing X-rays • Conduct vision testing (Snellen chart, peripheral vision, color blindness) • Conduct basic hearing test • Measure respiratory capacity/output • Range-of-Motion exercises • Conduct simulated ABO blood-typing
07.0	Demonstrate occupational safety skills related to the employer, employee, and the patient in the healthcare setting. The student will be able to:
	07.01 Recognize safety concerns related to the practice of health care.
	07.02 Demonstrate safety habits that will prevent injury to health care workers, co-workers, and patients including proper use personal protective equipment (PPE) and infection control practices.
	07.03 Identify poisons and hazardous materials to include the use and interpretation of a Safety Data Sheet (SDS) form.

CTE Standards and Benchmarks	
07.04	Demonstrate an understanding for the importance of fire safety practices including prevention, evacuation plans (R.A.C.E.) and the use of a fire extinguisher (P.A.S.S.).
07.05	Explore basic information on the dangers of blood borne diseases in healthcare including but not limited to HIV/AIDS and Hepatitis B.
07.06	Perform proper body mechanics to prevent self and patient injuries.

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as, experimental, quality, and safety procedures are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate and troubleshoot equipment/tools used to make observations. Students understand measurement error; and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

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English language learners communicate for social and instructional purposes within the school setting. ELD.K12.ELL.SI.1

English Language Development (ELD) Standards Special Notes:
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Special Notes

The intended progression for the Health Science Middle School courses is Introduction to Health Science Career Pathways (8709350 & 8709360), Orientation to Health Science Professions (8400110) and Exploration of Health Science Professions (8400310 & 8400210). By offering the middle school courses in the intended progression, each course increases in complexity, rigor and skill level as appropriate.

Special projects that are related to each occupational cluster are provided, including role playing activities related to specific careers, visualizing x-rays and crutch-walking, operating the microscope, and specific lab procedures. Team teaching and integration of the curriculum with English, Math and Science is encouraged.

Guest speakers from industry and related field trips make important contributions to the effectiveness of this course.

Career and Technical Student Organization (CTSO)

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Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities as identified on the secondary student's Individual Educational Plan (IEP) or 504 plan or postsecondary student's accommodations' plan to meet individual needs and ensure equal access. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

In addition to accommodations, some secondary students with disabilities (students with an IEP served in Exceptional Student Education (ESE)) will need modifications to meet their needs. Modifications change the outcomes or what the student is expected to learn, e.g., modifying the curriculum of a secondary career and technical education course. Note: postsecondary curriculum and regulated secondary programs cannot be modified.

Florida Department of Education
Curriculum Framework

The standards and/or benchmarks for this program were updated for the 2026-27 academic year.

Program Title: **Medical Skills and Services**
Program Type: **Non Career Preparatory**
Career Cluster: **Health Science**

Secondary – Non Career Preparatory	
Program Number	8400320
CIP Number	03179997PA
Grade Level	9-12
Program Length	1 credit
Teacher Certification	Refer to the **Course Structure** section.
CTSO	HOSA
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml

Purpose

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Health Science career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of the Health Science career cluster.

The content includes but is not limited to practical generic skills in health occupations.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Course Structure

This program is a planned sequence of instruction totaling one credit.

To teach the course(s) listed below, instructors must hold at least one of the teacher certifications indicated for that course.

The following table illustrates the secondary program structure:

Course Number	Course Title	Teacher Certification	Length	Level	Graduation Requirement
8400320	Medical Skills and Services	ANY HEALTH OCCUP G (See DOE approved list) HEALTH 6	1 credit	2	CT

(Graduation Requirement Codes: CT= Career & Technical Education, EQ= Equally Rigorous Science, EC= Economics, MA= Mathematics, PL= Personal Financial Literacy)

Florida's Career Readiness Skills for CTE Programs

Employability Skills	
01.0	Apply academic skills to workplace scenarios.
01.01	Use reading skills.
01.02	Use writing skills.
01.03	Use mathematical strategies and procedures.
01.04	Use scientific principles and procedures.
02.0	Design a solution to an industry problem.
02.01	Use critical thinking.
02.02	Use creativity.
02.03	Make sound decisions.
02.04	Solve problems.
02.05	Reason.
02.06	Plan and organize.
03.0	Manage resources within an industry project
03.01	Manage time.
03.02	Manage money or resources.
03.03	Manage materials.
03.04	Manage personnel.
04.0	Oversee the subcomponents, operations and output of a technical or organizational system.
04.01	Manage systems.
04.02	Monitor systems.
04.03	Improve systems.
05.0	Use information for decision making.
05.01	Locate information.
05.02	Organize information.
05.03	Use information.

	05.04 Analyze information.
	05.05 Communicate information.
06.0	Apply relevant technology to workplace scenarios to aid productivity.
	06.01 Use technology.
07.0	Interpret and express interpersonal communication.
	07.01 Communicate verbally.
	07.02 Listen actively.
	07.03 Comprehend written material.
	07.04 Convey information in writing.
	07.05 Communicate nonverbally.
	07.06 Interpret nonverbal communication.
08.0	Interact with others to accomplish workplace goals.
	08.01 Collaborate with others in a team.
	08.02 Respond to customer needs.
	08.03 Exercise leadership.
	08.04 Negotiate to resolve conflict.
	08.05 Respect others.
09.0	Manage personal behavior to maximize productivity and professional growth.
	09.01 Demonstrate responsibility and self-discipline.
	09.02 Adapt and show flexibility.
	09.03 Work independently.
	09.04 Demonstrate a willingness to learn.
	09.05 Demonstrate integrity.
	09.06 Demonstrate professionalism.
	09.07 Take initiative.
	09.08 Display positive attitude.
	09.09 Take responsibility for professional growth.

Career Exploration & Planning	
10.0	Explain career opportunities aligned with the regional economy and personal aspirations.
10.01	Describe regional occupations that are high-demand, high-growth, high-wage and/or high-skill.
10.02	Describe careers aligned with his or her interests, skills and values based on career assessment, experiential learning, career informational interviews, research and/or reflection.
11.0	Explain postsecondary pathways aligned with his or her career aspirations.
11.01	Compare and contrast postsecondary pathways, including education, employment, entrepreneurship and enlistment (the “Four Es”).
11.02	Compare and contrast regional postsecondary training provider options, including apprenticeships, technical colleges, state colleges, universities and industry-recognized certification providers.
11.03	Define postsecondary credentialing and stacking options, including industry-recognized certifications, apprenticeship certificates of completion, career certificates, licenses and associate or baccalaureate degrees.
11.04	Compare postsecondary training data for training programs of interest, such as total costs, average student loan debt, and median earnings and job placement rates after program completion.
12.0	Develop a personalized career and academic plan.
12.01	Prioritize an occupation, credential and postsecondary training provider for plan formation.
12.02	Self-assess progress toward meeting graduation requirements and skill-development goals.
12.03	Develop and complete a chronological checklist of steps and deadlines prior to postsecondary training or national service application that includes any required documentation to gather, writing prompts and examinations.
12.04	Identify a variety of financial aid opportunities, including scholarships, grants, savings, work, work-study programs, private loans and federal loans.
12.05	Develop a postsecondary training budget that is inclusive of living and school expenses.
Job Attainment	
13.0	Find, assess and apply to job opportunities.
13.01	Identify online job posts relevant to his or her career aspirations.
13.02	Compare and contrast the job posts’ required qualifications, job duties, compensation, benefits and employers.
13.03	Define what information, documentation and writing prompts are required for the positions.
14.0	Communicate personal competence, character and fit for a job opportunity.
14.01	Develop a resume.
14.02	Write a cover letter.
14.03	Curate a professional portfolio that includes work products.
14.04	Prepare for and experience a mock job interview.

15.0	Cultivate and leverage relationships to professionally advance.
	15.01 Request a signed reference letter, letter of recommendation and/or an online skill/professionalism endorsement.
	15.02 Develop a plan to cultivate a professional digital footprint.
	15.03 Develop a networking plan for a specific industry of interest.

Standards

After successfully completing this program, the student will be able to perform the following:

01.0 Demonstrate the ability to communicate effectively.
02.0 Apply basic mathematics skills used in health care.
03.0 Demonstrate knowledge of the services provided by health occupations career clusters.
04.0 Recognize and practice basic health skills.
05.0 Demonstrate first aid, CPR, and BLS.
06.0 Demonstrate knowledge of legal aspects of healthcare delivery.
07.0 Demonstrate an understanding of factors that affect mental and emotional health.
08.0 Demonstrate knowledge of blood-borne diseases
09.0 Demonstrate an understanding of technology applications in healthcare.
10.0 Demonstrate employability skills.

Florida Department of Education
Student Performance Standards

Course Title: **Medical Skills and Services**
Course Number: **8400320**
Course Credit: **1**

Course Description:

The purpose of this course is to assist students in making informed decisions about their future academic and occupational goals and to provide information regarding careers and skills in the Health Science career cluster. The content of this course includes but is not limited to: employability and communication skills, legal and technological aspects of health care, medical mathematics, services provided by health science professions, mental health and wellness, occupational safety, and basic health science skills.

CTE Standards and Benchmarks	
01.0	Demonstrate the ability to communicate effectively. The student will be able to:
01.01	Differentiate between verbal, non-verbal, and written communication.
01.02	Develop active listening skills.
01.03	Demonstrate ability to follow written and oral directions.
01.04	Analyze elements of constructive and non-constructive criticism.
01.05	Define, pronounce and spell common medical terms and abbreviations necessary to safely carry out medical instructions.
01.06	Demonstrate awareness of and sensitivity to barriers to communication, including cultural differences, language, and disability.
02.0	Apply basic mathematics skills used in health care. The student will be able to:
02.01	Measure and record height and weight using a variety of measurement systems used in health care.
02.02	Convert common weights, measures and volumes to and from metric as applied in the healthcare setting.
02.03	Convert between regular and 24-hour clock time.
02.04	Perform mathematical calculations to solve numeric, symbolic, and word problems relevant to healthcare occupations and/or medical scenarios.
03.0	Demonstrate knowledge of the services provided by health occupations career clusters. The student will be able to:
03.01	Discuss the history of health care services and medical progress in the (5) health science career pathway, such as developments in

CTE Standards and Benchmarks	
	diagnostic technology, sterilization, electronic health records, etc.
03.02	Describe at least 2 occupations for each health science pathway, 3 types of services provided by each career chosen, and perform at least 2 skills for each career chosen: • Therapeutic Services • Diagnostic Services • Health Informatics • Support Services • Biotechnology Research and Development
03.03	Research and/or explore at least 3 “alternative medicine” occupations and services of each.
04.0	Recognize and practice basic health skills. The student will be able to:
04.01	Demonstrate proper hand cleansing, including proper hand-washing and proper use of alcohol-based hand gel.
04.02	Demonstrate proper application and disposal of Personal Protective Equipment (gloves, gown, mask, goggles)
04.03	Perform proper body mechanics to prevent injury to patients and self.
04.04	Apply infection control techniques designed to prevent the spread of diseases to the care of all patients following Centers for Disease Control and Prevention (CDC) guidelines.
04.05	Analyze the parts of the chain of infection and how to break it.
04.06	Demonstrate how to prevent accidents, injuries and infection in accordance with OSHA standards.
04.07	Demonstrate fire safety in medical facilities including RACE and PASS procedures.
04.08	Demonstrate and record vital signs to include temperature, pulse, blood pressure, and respirations while recognizing the normal range for each.
04.09	Demonstrate vision screening.
04.10	Demonstrate ability to test for hearing using simple tools.
04.11	Demonstrate ability to test reflexes.
05.0	Demonstrate first aid, CPR, and BLS. The student will be able to:
05.01	Describe wounds and the appropriate first aid treatment.
05.02	Identify various types of shock and their treatments.

CTE Standards and Benchmarks	
	05.03 Recognize types of poisoning and treatment.
	05.04 Identify classifications of burns and their appropriate treatment.
	05.05 Describe ill effects of heat and cold and the appropriate first aid for each.
	05.06 Demonstrate immobilization for suspected fractures.
	05.07 Recognize the signs, symptoms, and appropriate first aid for heart attack.
	05.08 Recognize the signs, symptoms, and appropriate first aid for fainting and seizures.
	05.09 Recognize the signs, symptoms, and appropriate first aid for diabetic reactions.
	05.10 Recognize the signs, symptoms, and appropriate first aid for stroke.
	05.11 Describe first aid for foreign objects in the eye and ear.
	05.12 Perform skills in BLS.
	05.13 Demonstrate first aid for choking.
06.0	Demonstrate knowledge of legal aspects of healthcare delivery. The student will be able to:
	06.01 Identify how laws (i.e., “Good Samaritan”) protect individuals in emergent situations.
	06.02 Describe the need for advanced directives and health care surrogates.
	06.03 Describe legal procedures for donating organs.
	06.04 Describe the need for health insurance and the different types available.
07.0	Demonstrate an understanding of factors that affect mental and emotional health. The student will be able to:
	07.01 Analyze causes of stress/stressors.
	07.02 Identify problem solving skills to resolve stress.
	07.03 Demonstrate stress reduction techniques.
	07.04 Demonstrate knowledge of mental health as a legitimate illness, equivalent to all general health conditions.

CTE Standards and Benchmarks	
	07.05 Identify factors that explain why health occupations are emotionally and physically demanding.
	07.06 Demonstrate coping strategies for dealing with mental and emotional health issues**.**
	07.07 Recognize the steps in the grief process.
08.0	Demonstrate knowledge of blood-borne diseases. The student will be able to:
	08.01 Describe the differences between fact and fallacy about the transmission and treatment of diseases caused by blood-borne pathogens.
	08.02 Evaluate the differences between outbreak, epidemic, endemic, and pandemic.
	08.03 Identify community resources and services available to the individual with diseases caused by blood-borne pathogens.
	08.04 Identify at risk behaviors for blood-borne disease and the public education necessary to reduce community spread.
	08.05 Demonstrate knowledge of the legal aspect of blood-borne disease.
09.0	Demonstrate an understanding of technology applications in healthcare. The student will be able to:
	09.01 Differentiate between the various computer based diagnostic studies in healthcare (e.g., X-ray, MRI, CT scan, and CPET).
	09.02 Discuss how computers affect legal and ethical questions in the health field.
	09.03 Discuss the use of Electronic Health Records, including information included.
	09.04 Demonstrate how to send patient information digitally.
	09.05 Discuss the security and necessary protections of Electronic Health Records and other electronic communications as determined by HIPAA regulations.
10.0	Demonstrate employability skills. The student will be able to:
	10.01 Explore steps for getting a job in health care, such as identifying local job openings, completing a job application, and participating in a mock job interview.
	10.02 Examine levels of education, credentialing requirements including licensure and certification, employment opportunities, workplace environments, and career growth potential.
	10.03 Create a cover letter and resume.
	10.04 Discuss professionalism and the ethical role and responsibility of the healthcare worker.

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as, experimental, quality, and safety procedures are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate and troubleshoot equipment/tools used to make observations. Students understand measurement error; and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

Instruction and learning activities are provided in a laboratory setting using hands-on experiences with the equipment, materials and technology appropriate to the course content and in accordance with current practices.

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English language learners communicate for social and instructional purposes within the school setting. ELD.K12.ELL.SI.1

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Special Notes

The cooperative method of instruction is not appropriate for this course.

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Cooperative Training – OJT

On-the-job training is appropriate but not required for this program. Whenever offered, the rules, guidelines, and requirements specified in the OJT framework apply.

Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities as identified on the secondary student's Individual Educational Plan (IEP) or 504 plan or postsecondary student's accommodations' plan to meet individual needs and ensure equal access. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

In addition to accommodations, some secondary students with disabilities (students with an IEP served in Exceptional Student Education (ESE)) will need modifications to meet their needs. Modifications change the outcomes or what the student is expected to learn, e.g., modifying the curriculum of a secondary career and technical education course. Note: postsecondary curriculum and regulated secondary programs cannot be modified.

Some secondary students with disabilities (ESE) may need additional time (i.e., longer than the regular school year), to master the student performance standards associated with a regular course or a modified course. If needed, a student may enroll in the same career and technical course more than once. Documentation should be included in the IEP that clearly indicates that it is anticipated that the student may need an additional year to complete a Career and Technical Education (CTE) course. The student should work on different competencies and new applications of competencies each year toward completion of the CTE course. After achieving the competencies identified for the year, the student earns credit for the course. It is important to ensure that credits earned by students are reported accurately. The district's information system must be designed to accept multiple credits for the same course number for eligible students with disabilities.

Florida Department of Education
Curriculum Framework

No new students may be enrolled in this program starting 2026-27. The last year to report any enrollment is 2026-27. This program was replaced by Cooperative Education On-the-Job Training (OJT) 9601500 (1032011103).

Course Title: **Health Science Cooperative Education - OJT**
Course Type: **Career Preparatory**
Career Cluster: **Health Science**

Secondary – Cooperative Education - OJT	
Course Number	8400410
CIP Number	03179999CP
Grade Level	9-12
Course Length	Multiple credits
Teacher Certification	Refer to the **Course Structure** section.
CTSO	HOSA
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml

Purpose

This course offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Health Science cluster(s); provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of the Health Science cluster(s).

Each student job placement must be related to the job preparatory program in which the student is enrolled or has completed.

The purpose of this course is to provide the on-the-job training component when the **cooperative method of instruction** is appropriate. Whenever the cooperative method is offered, the following is required for each student: a training agreement; a training plan signed by the student, teacher and employer, including instructional objectives; a list of on-the-job and in-school learning experiences; a workstation which reflects equipment, skills and tasks which are relevant to the occupation which the student has chosen as a career goal; and a site supervisor with a working knowledge of the selected occupation. The workstation may be in an industry setting or in a virtual learning environment. The student **must be compensated** for work performed.

The teacher/coordinator must meet with the site supervisor a minimum of once during each grading period for the purpose of evaluating the student's progress in attaining the competencies listed in the training plan.

Health Science Cooperative Education - OJT may be taken by a student for one or more semesters. A student may earn multiple credits in this course. The specific student performance standards which the student must achieve to earn credit are specified in the Cooperative Education - OJT Training Plan.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Course Structure

To teach the course listed below, instructors must hold at least one of the teacher certifications indicated for that course.

The following table illustrates the secondary course structure:

Course Number	Course Title	Teacher Certification	Length	Level	Graduation Requirement
8400410	Health Science Cooperative Education - OJT	ANY HEALTH OCCUP G (See DOE approved list)	Multiple credits	2	CT

(Graduation Requirement Codes: CT= Career & Technical Education, EQ= Equally Rigorous Science, EC= Economics, MA= Mathematics, PL= Personal Financial Literacy)

Florida's Career Readiness Skills for CTE Programs

Employability Skills	
01.0	Apply academic skills to workplace scenarios.
01.01	Use reading skills.
01.02	Use writing skills.
01.03	Use mathematical strategies and procedures.
01.04	Use scientific principles and procedures.
02.0	Design a solution to an industry problem.
02.01	Use critical thinking.
02.02	Use creativity.
02.03	Make sound decisions.
02.04	Solve problems.
02.05	Reason.
02.06	Plan and organize.
03.0	Manage resources within an industry project
03.01	Manage time.
03.02	Manage money or resources.
03.03	Manage materials.
03.04	Manage personnel.
04.0	Oversee the subcomponents, operations and output of a technical or organizational system.
04.01	Manage systems.
04.02	Monitor systems.
04.03	Improve systems.
05.0	Use information for decision making.
05.01	Locate information.
05.02	Organize information.
05.03	Use information.

	05.04 Analyze information.
	05.05 Communicate information.
06.0	Apply relevant technology to workplace scenarios to aid productivity.
	06.01 Use technology.
07.0	Interpret and express interpersonal communication.
	07.01 Communicate verbally.
	07.02 Listen actively.
	07.03 Comprehend written material.
	07.04 Convey information in writing.
	07.05 Communicate nonverbally.
	07.06 Interpret nonverbal communication.
08.0	Interact with others to accomplish workplace goals.
	08.01 Collaborate with others in a team.
	08.02 Respond to customer needs.
	08.03 Exercise leadership.
	08.04 Negotiate to resolve conflict.
	08.05 Respect others.
09.0	Manage personal behavior to maximize productivity and professional growth.
	09.01 Demonstrate responsibility and self-discipline.
	09.02 Adapt and show flexibility.
	09.03 Work independently.
	09.04 Demonstrate a willingness to learn.
	09.05 Demonstrate integrity.
	09.06 Demonstrate professionalism.
	09.07 Take initiative.
	09.08 Display positive attitude.
	09.09 Take responsibility for professional growth.

Career Exploration & Planning	
10.0	Explain career opportunities aligned with the regional economy and personal aspirations.
10.01	Describe regional occupations that are high-demand, high-growth, high-wage and/or high-skill.
10.02	Describe careers aligned with his or her interests, skills and values based on career assessment, experiential learning, career informational interviews, research and/or reflection.
11.0	Explain postsecondary pathways aligned with his or her career aspirations.
11.01	Compare and contrast postsecondary pathways, including education, employment, entrepreneurship and enlistment (the “Four Es”).
11.02	Compare and contrast regional postsecondary training provider options, including apprenticeships, technical colleges, state colleges, universities and industry-recognized certification providers.
11.03	Define postsecondary credentialing and stacking options, including industry-recognized certifications, apprenticeship certificates of completion, career certificates, licenses and associate or baccalaureate degrees.
11.04	Compare postsecondary training data for training programs of interest, such as total costs, average student loan debt, and median earnings and job placement rates after program completion.
12.0	Develop a personalized career and academic plan.
12.01	Prioritize an occupation, credential and postsecondary training provider for plan formation.
12.02	Self-assess progress toward meeting graduation requirements and skill-development goals.
12.03	Develop and complete a chronological checklist of steps and deadlines prior to postsecondary training or national service application that includes any required documentation to gather, writing prompts and examinations.
12.04	Identify a variety of financial aid opportunities, including scholarships, grants, savings, work, work-study programs, private loans and federal loans.
12.05	Develop a postsecondary training budget that is inclusive of living and school expenses.
Job Attainment	
13.0	Find, assess and apply to job opportunities.
13.01	Identify online job posts relevant to his or her career aspirations.
13.02	Compare and contrast the job posts’ required qualifications, job duties, compensation, benefits and employers.
13.03	Define what information, documentation and writing prompts are required for the positions.
14.0	Communicate personal competence, character and fit for a job opportunity.
14.01	Develop a resume.
14.02	Write a cover letter.
14.03	Curate a professional portfolio that includes work products.
14.04	Prepare for and experience a mock job interview.

15.0	Cultivate and leverage relationships to professionally advance.
	15.01 Request a signed reference letter, letter of recommendation and/or an online skill/professionalism endorsement.
	15.02 Develop a plan to cultivate a professional digital footprint.
	15.03 Develop a networking plan for a specific industry of interest.

Standards

After successfully completing this program, the student will be able to perform the following:

01.0 Perform designated job skills.
02.0 Demonstrate work ethics.

Florida Department of Education
Student Performance Standards

Program Title: **Health Science Cooperative Education - OJT**
Secondary Number: **8400410**

Standards and Benchmarks	
01.0	Perform designated job skills. The student will be able to:
01.01	Perform tasks as outlined in the training plan.
01.02	Demonstrate job performance skills.
01.03	Demonstrate safety procedures on the job.
01.04	Maintain appropriate records.
01.05	Attain an acceptable level of productivity.
01.06	Demonstrate appropriate dress and grooming habits.
02.0	Demonstrate work ethics. The student will be able to:
02.01	Follow directions.
02.02	Demonstrate good human relations skills on the job.
02.03	Demonstrate good work habits.
02.04	Demonstrate acceptable business ethics.

Additional Information

Special Notes

The **Cooperative Education Manual** is available on-line and has guidelines for students, teachers, employers, parents and other administrators and sample training agreements. It can be accessed on the FDOE Website at http://fldoe.org/academics/career-adult-edu/career-tech-edu/additional-cte-programs-courses/diversified-edu.stml

Career and Technical Student Organization (CTSO)

CTSOs are co-curricular career and technical student organizations providing leadership training and reinforcing specific career and technical skills. Career and Technical Student Organizations provide activities for students as an integral part of the instruction offered. Other CTSOs not listed in this curriculum framework or recognized by the Florida Department of Education are permissible provided they support student mastery over the standards and benchmarks of this curriculum framework.

Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities as identified on the secondary student's Individual Educational Plan (IEP) or 504 plan or postsecondary student's accommodations' plan to meet individual needs and ensure equal access. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

Note: postsecondary curriculum and regulated secondary programs cannot be modified.

Some secondary students with disabilities (ESE) may need additional time (i.e., longer than the regular school year), to master the student performance standards associated with a regular course or a modified course. If needed, a student may enroll in the same career and technical course more than once. Documentation should be included in the IEP that clearly indicates that it is anticipated that the student may need an additional year to complete a Career and Technical Education (CTE) course. The student should work on different competencies and new applications of competencies each year toward completion of the CTE course. After achieving the competencies identified for the year, the student earns credit for the course. It is important to ensure that credits earned by students are reported accurately. The district's information system must be designed to accept multiple credits for the same course number for eligible students with disabilities.

Florida Department of Education
Curriculum Framework

The standards and benchmarks for this program were updated for the 2026-27 academic year.

Program Title: **Exercise Science**
Program Type: **Career Preparatory**
Career Cluster: **Health Science**

Secondary – Career Preparatory	
Program Number	8417000
CIP Number	0331050405
Grade Level	9-12
Program Length	3 credits
Teacher Certification	Refer to the **Program Structure** section.
CTSO	HOSA
SOC Codes (all applicable)	31-9099 -- Healthcare Support Workers, All Other 39-9031 -- Fitness Trainers and Aerobics Instructors
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml

Purpose

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Health Science career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of Health Science career cluster.

The content includes but is not limited to planning, management, finance, technical and production skills, applied aspect of leadership, underlying principles of technology, labor issues, community issues, and health, safety, and environmental issues. Work-based learning experiences are an integral part of this program.

The purpose of this program is to prepare students for the wellness and fitness marketplace and its various components, such as instructing or coaching groups or individuals in exercise activities and the fundamentals of an individual's health and wellness. Personal trainers demonstrate techniques and methods of participation and observe participants, and inform them of corrective measures necessary to improve their skills and personal health.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Program Structure

This program is a planned sequence of instructions totaling three credits. The two-credit Health Science Core (Health Science Anatomy & Physiology 8417100 and Health Science Foundations 8417100) is required as a prerequisite for all programs and options. Secondary students completing the two required core courses will not have to repeat the core in postsecondary.

To teach the courses listed below, instructors must hold at least one of the teacher certifications indicated for that course.

The following table illustrates the secondary program structure:

Course Number	Course Title	Teacher Certification	Length	SOC Code	Level	Graduation Requirement
8417100 **OR** *2000350* **OR** *2000360*	Health Science Anatomy & Physiology **OR** *Anatomy and Physiology* **OR** *Anatomy and Physiology Honors*	ANY HEALTH OCCUP G (See DOE approved list)	1 credit	31-9099	3	EQ
8417110	Health Science Foundations		1 credit	31-9099	3	CT
8417120	Exercise Science	PH THER TEC @7 G HEALTH FIT SPEC 7G MED PROF 7 G	1 credit	39-9031	3	CT

(Graduation Requirement Codes: CT= Career & Technical Education, EQ= Equally Rigorous Science, EC= Economics, MA= Mathematics, PL= Personal Financial Literacy)

Florida's Career Readiness Skills for CTE Programs

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01.0	Apply academic skills to workplace scenarios.
01.01	Use reading skills.
01.02	Use writing skills.
01.03	Use mathematical strategies and procedures.
01.04	Use scientific principles and procedures.
02.0	Design a solution to an industry problem.
02.01	Use critical thinking.
02.02	Use creativity.
02.03	Make sound decisions.
02.04	Solve problems.
02.05	Reason.
02.06	Plan and organize.
03.0	Manage resources within an industry project
03.01	Manage time.
03.02	Manage money or resources.
03.03	Manage materials.
03.04	Manage personnel.
04.0	Oversee the subcomponents, operations and output of a technical or organizational system.
04.01	Manage systems.
04.02	Monitor systems.
04.03	Improve systems.
05.0	Use information for decision making.
05.01	Locate information.
05.02	Organize information.
05.03	Use information.

	05.04 Analyze information.
	05.05 Communicate information.
06.0	Apply relevant technology to workplace scenarios to aid productivity.
	06.01 Use technology.
07.0	Interpret and express interpersonal communication.
	07.01 Communicate verbally.
	07.02 Listen actively.
	07.03 Comprehend written material.
	07.04 Convey information in writing.
	07.05 Communicate nonverbally.
	07.06 Interpret nonverbal communication.
08.0	Interact with others to accomplish workplace goals.
	08.01 Collaborate with others in a team.
	08.02 Respond to customer needs.
	08.03 Exercise leadership.
	08.04 Negotiate to resolve conflict.
	08.05 Respect others.
09.0	Manage personal behavior to maximize productivity and professional growth.
	09.01 Demonstrate responsibility and self-discipline.
	09.02 Adapt and show flexibility.
	09.03 Work independently.
	09.04 Demonstrate a willingness to learn.
	09.05 Demonstrate integrity.
	09.06 Demonstrate professionalism.
	09.07 Take initiative.
	09.08 Display positive attitude.
	09.09 Take responsibility for professional growth.

Career Exploration & Planning	
10.0	Explain career opportunities aligned with the regional economy and personal aspirations.
10.01	Describe regional occupations that are high-demand, high-growth, high-wage and/or high-skill.
10.02	Describe careers aligned with his or her interests, skills and values based on career assessment, experiential learning, career informational interviews, research and/or reflection.
11.0	Explain postsecondary pathways aligned with his or her career aspirations.
11.01	Compare and contrast postsecondary pathways, including education, employment, entrepreneurship and enlistment (the “Four Es”).
11.02	Compare and contrast regional postsecondary training provider options, including apprenticeships, technical colleges, state colleges, universities and industry-recognized certification providers.
11.03	Define postsecondary credentialing and stacking options, including industry-recognized certifications, apprenticeship certificates of completion, career certificates, licenses and associate or baccalaureate degrees.
11.04	Compare postsecondary training data for training programs of interest, such as total costs, average student loan debt, and median earnings and job placement rates after program completion.
12.0	Develop a personalized career and academic plan.
12.01	Prioritize an occupation, credential and postsecondary training provider for plan formation.
12.02	Self-assess progress toward meeting graduation requirements and skill-development goals.
12.03	Develop and complete a chronological checklist of steps and deadlines prior to postsecondary training or national service application that includes any required documentation to gather, writing prompts and examinations.
12.04	Identify a variety of financial aid opportunities, including scholarships, grants, savings, work, work-study programs, private loans and federal loans.
12.05	Develop a postsecondary training budget that is inclusive of living and school expenses.
Job Attainment	
13.0	Find, assess and apply to job opportunities.
13.01	Identify online job posts relevant to his or her career aspirations.
13.02	Compare and contrast the job posts’ required qualifications, job duties, compensation, benefits and employers.
13.03	Define what information, documentation and writing prompts are required for the positions.
14.0	Communicate personal competence, character and fit for a job opportunity.
14.01	Develop a resume.
14.02	Write a cover letter.
14.03	Curate a professional portfolio that includes work products.
14.04	Prepare for and experience a mock job interview.

15.0	Cultivate and leverage relationships to professionally advance.
	15.01 Request a signed reference letter, letter of recommendation and/or an online skill/professionalism endorsement.
	15.02 Develop a plan to cultivate a professional digital footprint.
	15.03 Develop a networking plan for a specific industry of interest.

Standards

After successfully completing this program, the student will be able to perform the following:

Health Science Core

01.0 Analyze and interpret an overview of the human body, including organization and chemical process.
02.0 Apply correct medical terminology relating to body structure and function within a real-world application.
03.0 Evaluate cells and tissues microscopically and macroscopically and relate their specialized functions.
04.0 Analyze the integumentary system in relation to health and disease.
05.0 Analyze the skeletal system in relation to health and disease.
06.0 Analyze the muscular system in relation to health and disease.
07.0 Analyze the nervous system in relation to health and disease.
08.0 Analyze the endocrine system in relation to health and disease.
09.0 Analyze the cardiovascular/circulatory system in relation to health and disease.
10.0 Analyze the lymphatic and immune systems in relation to health and disease.
11.0 Analyze the respiratory system in relation to health and disease.
12.0 Analyze the digestive system in relation to health and disease.
13.0 Analyze the urinary system in relation to health and disease.
14.0 Analyze both the male and female reproductive systems in relation to health and disease.
15.0 Identify and explain factors relating to genetics and disease.
16.0 Evaluate and apply the principles of disease transmission and control to real-world scenarios.
17.0 Demonstrate knowledge of the healthcare delivery system and health occupations.
18.0 Demonstrate the ability to communicate and use interpersonal skills effectively.
19.0 Demonstrate legal and ethical responsibilities.
20.0 Demonstrate an understanding of and apply wellness and disease concepts.
21.0 Recognize and practice safety and security procedures.
22.0 Recognize and respond to emergency situations.
23.0 Recognize and practice infection control procedures.
24.0 Demonstrate an understanding of information technology applications in healthcare.
25.0 Demonstrate employability skills.
26.0 Demonstrate knowledge of blood-borne diseases, including HIV/AIDS.
27.0 Apply basic math and science skills.

Exercise Science

28.0 Demonstrate a working knowledge of legal and ethical issues in the fitness and wellness industry as it relates to professional development, continuing education, and the code of professional conduct of a Certified Personal Trainer.
29.0 Outline the process of developing a successful personal training business.
30.0 Identify and describe basic human anatomy and physiology.
31.0 Understand the theories and practices of human movement science and exercise metabolism.
32.0 Classify risk factors for fitness and exercise activities and identify proper medical referrals needed to modify a fitness plan.

33.0 Apply basic principles of nutrition and wellness in assessing health and wellness.
34.0 Understand and define the psychosocial aspects of health and fitness.

Florida Department of Education
Student Performance Standards

Health Science Core

The first two courses in this program are referred to as the Health Science Core and consist of the courses Health Science Anatomy & Physiology (8417100) and Health Science Foundations (8417110). **To ensure consistency whenever these courses are offered, the standards and benchmarks for the health science core have been placed in a separate document. To access this document, visit this link:** https://www.fldoe.org/file/20894/health-sci-core-secondary-2627.rtf

The two credit core is required as a prerequisite for all secondary programs except for Practical Nursing and Pharmacy Technician. Secondary students completing the two required courses will not have to repeat the core in postsecondary. When the recommended sequence is followed, the structure allows students to complete specified courses for employment or remain for advanced training or cross-training.

Course Title: **Health Science Anatomy & Physiology**
Course Number: **8417100**
Course Credit: **1**

Course Description:

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as, experimental quality, and safety procedures will be an integral part of this course. Students will interact with materials and primary sources of data or with secondary sources of data to observe and understand the natural world. Students will develop an understanding of measurement error, and develop the skills to aggregate, interpret, and present the data and resulting conclusions. Equipment and supplies will be provided to enhance these hands-on experiences for students. A minimum of 20% of classroom time will be dedicated to laboratory experiences.

This course is part of the secondary Health Core, consisting of an overview of the human body, both structurally and functionally, with emphasis on the pathophysiology and transmission of disease. Medical terminology is an integral part of the course.

The course Anatomy and Physiology (2000350) or Anatomy and Physiology Honors (2000360) may be substituted for the course Health Science Anatomy & Physiology (8417100).

The course Health Science Anatomy & Physiology (8417100) is designated as an equally rigorous (EQ) science credit.

Course Title: **Health Science Foundations**
Course Number: **8417110**
Course Credit: **1**

Course Description:
This course is part of the Secondary Health Core, designed to provide the student with an in-depth knowledge of the health care system and associated occupations. Emphasis is placed on communication and interpersonal skills, use of technology, ethics, and the development of critical thinking and problem-solving skills. Students may shadow professionals throughout the course.

Florida Department of Education
Student Performance Standards

Course Title: **Exercise Science**
Course Number: **8417120**
Course Credit: **1**

Course Description:

This course prepares students to be employed as Personal Trainers. Content includes, but not limited to, identifying and practicing within the appropriate scope of practice for a personal trainer, developing and implement exercise programs for apparently healthy individuals or those who have medical clearance to exercise, proficiency in the appropriate fitness equipment used, as well as a foundation in the musculoskeletal system of the body.

CTE Standards and Benchmarks	
28.0	Demonstrate a working knowledge of legal and ethical issues in the fitness and wellness industry as it relates to professional development, continuing education, and the code of professional conduct of a Certified Personal Trainer. The students will be able to:
28.01	Distinguish a fitness professional's role within the allied health industry.
28.02	Identify requirements and opportunities for continuing education in the fitness industry.
28.03	Identify and define the Certified Personal Trainers' responsibilities and duties within their legal scope of practice.
28.04	Demonstrate the professional code of conduct of a Certified Personal Trainer.
28.05	Discuss the legal and ethical benefits and the consequences of performance-enhancing drugs and supplements**.**
28.06	Outline and present a current legal and/or ethical issue related to fitness and wellness.
28.07	Demonstrate knowledge of the Health Insurance Portability and Accountability Act (HIPAA) when working with a healthcare provider.
29.0	Outline the process of developing a successful personal training business. The students will be able to:
29.01	Describe the qualities and characteristics of uncompromising customer service.
29.02	Discover employment opportunities for Certified Personal Trainers in the fitness industry.
29.03	Craft a professional resume, conduct a job search, and prepare for an interview.
29.04	Apply working knowledge of interviewing skills both as an employee and employer.
29.05	Develop basic membership sales and marketing strategies to drive clientele growth.

CTE Standards and Benchmarks	
	29.06 Research the basic components of starting a new business, such as budgetary guidelines, SWOT analysis, liability insurance, and LLCs.
30.0	Identify and describe basic human anatomy and physiology. The students will be able to:
	30.01 Evaluate the structure of the human skeleton, including the structure and function of the different types of joints and muscle movements.
	30.02 Evaluate the anatomy and physiology of each of the following systems and how they interact with each other, including: • nervous system • musculoskeletal (muscular and skeletal) • cardiorespiratory/cardiovascular • endocrine • digestive
31.0	Understand the theories and practices of human movement science and exercise metabolism. The students will be able to:
	31.01 Classify health fitness standards, including components of wellness, describe health appraisals, fitness assessments, and exercise prescriptions. This would include: • collecting subjective information from clients using health screening assessments • conducting physiological assessments • conducting cardiorespiratory assessments • conduct posture assessments • conduct movement assessments • conduct performance assessments
	31.02 Assess and research various techniques to assess body composition and its relationship to the assessment of recommended body weight.
	31.03 Demonstrate an understanding of common training types, including Flexibility, Cardiorespiratory, Core, Balance, Plyometric (Reactive), Resistance; Speed, Agility, and Quickness.
	31.04 Define cardio-respiratory endurance and the benefits of cardio-respiratory endurance training.
	31.05 Define and identify the principles that govern cardio-respiratory exercise prescription: Frequency, Intensity, Time, Type, and Enjoyment of Exercise (FITTE).
	31.06 Differentiate between muscular strength and muscular endurance and types.
	31.07 Define and understand muscular flexibility.
	31.08 Summarize the scientific terminology that governs exercise and movement, such as directional terms and body planes. (From 30.01)
	31.09 Compare and contrast the different muscle contractions, including concentric, eccentric, and isometric. (From 30.03)

CTE Standards and Benchmarks	
	31.10 Identify the origin, insertion, and action for each major muscle.
	31.11 Describe the relationship between the agonist, antagonist, fixators, and synergist for muscle movement.
	31.12 Evaluate and explain the physiology of weight loss, weight gain, and weight management.
	31.13 Define aerobic and anaerobic exercise and examples of each.
	31.14 Demonstrate an understanding of length tension relationship and how it relates to muscles and human movement.
	31.15 Demonstrate an understanding of the concept of force coupling and how it relates to muscles and human movement.
	31.16 Define and describe factors on how to select appropriate, safe, and effective methods of exercise, including the needs and limitations of special populations such as youth/children, older adults, pregnancy, obese, diabetic, hypertensive, heart disease, osteoporotic, arthritic, and lung disease clientele.
	31.17 Prepare and develop exercise prescriptions to aid individuals with personal health goals.
32.0	Classify risk factors for fitness and exercise activities and identify proper medical referrals needed to modify a fitness plan. The students will be able to:
	32.01 Demonstrate skills necessary to recognize the risk factors associated with strength and fitness participation.
	32.02 Demonstrate knowledge and understanding of the risk factors associated with fitness-related injuries.
	32.03 Demonstrate safe and proper techniques in using fitness and personal training equipment/modalities.
	32.04 Define and describe the safe and effective use of selected exercise training methods, including various forms of resistance and proprioception modalities.
	32.05 Identify risk factors that may interfere with safe participation in exercise.
	32.06 Evaluate the physiological effects of illness (including: obesity, diabetes, hypertension, heart disease, osteoporosis, arthritis, lung disease), alcohol, and tobacco.
33.0	Apply basic principles of nutrition and wellness in assessing health and wellness. The students will be able to:
	33.01 Identify strategies that empower clientele to make nutritional decisions based on determining reliability, validity, and credibility of nutrition information from various source types.
	33.02 Discuss the national Dietary Guidelines for Americans.
	33.03 Demonstrate a basic understanding of supplementation use in fitness and athletic performance to address client wellbeing during activity and refer as needed.
	33.04 Create a nutrition and wellness research paper.

CTE Standards and Benchmarks	
34.0	Understand and define the psychosocial aspects of health and fitness. The students will be able to:
34.01	Describe the characteristics of a positive client experience, including client expectations and structured initial client sessions for optimal effectiveness.
34.02	Assess a client's stage in changing unwanted behaviors and implement behavior change techniques to enhance exercise adherence.
34.03	Describe characteristics of effective communication and rapport building.
34.04	Describe the elements of effective SMART goal-setting techniques.
34.05	Identify the psychological benefits of regular exercise and social influences on exercise adherence and support.
34.06	Perform client education utilizing concepts of communication and differing learning styles.
34.07	Compare and contrast lifestyle factors that improve health and increase longevity.
34.08	Prepare and explain a beneficial lifetime exercise program and staying healthy in relation to cardio-respiratory exercise prescriptions.
34.09	Define and understand the role of fitness in relation to stress management and maintaining health.
34.10	Describe the relationship between fitness and aging.

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as, experimental, quality, and safety procedures are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate, and troubleshoot equipment/tools used to make observations. Students understand measurement error; and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

This program requires a clinical component of approximately 50% the length of the courses following the health science core. A portion of the clinical experience can be achieved through simulation when appropriate.

Clinical courses require contact hours in the clinical setting in order to complete the health science program. Hospitals, nursing homes, and other clinical facilities with clinical affiliation agreements limit the number of students that can rotate and/or be on site at one time. Most facilities, including hospitals and nursing homes, limit the number of students to 15. Due to these industry limitations, it is recommended that the student ratio be 15:1 (student/teacher) based on the clinical facilities that students attend to for clinical training.

Florida Standards for English Language Development (ELD)

English language learners communicate for social and instructional purposes within the school setting. ELD.K12.ELL.SI.1

English Language Development (ELD) Standards Special Notes:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. For additional information on the development and implementation of the ELD standards, please contact the Bureau of Student Achievement through Language Acquisition at sala@fldoe.org.

Special Notes

The purpose of the programs in this cluster is to prepare students for employment or advanced training in the health occupations industry. The programs in this cluster also provide students the opportunity to be cross-trained in a variety of entry level positions.

Following the completion of the Health Science Core, the student is eligible to take the National Health Care Foundation Skill Standards Assessment with instructor approval and the completion of a portfolio.

However, in order for students to participate in the ACSM Certified Personal Trainer Certification exam they must be 18 years of age, have earned a high school diploma, and hold a current Adult AHA CPR certification. For more information on this exam please visit www.acsm.org

This program meets the Department of Health's education requirements for HIV/AIDS, Domestic Violence and Prevention of Medical Errors. Although not a requirement for initial licensure, it is a requirement for renewal, therefore the instructor **may** provide a certificate for renewal purposes to the student verifying these requirements have been met.

Career and Technical Student Organization (CTSO)

CTSOs are co-curricular career and technical student organizations providing leadership training and reinforcing specific career and technical skills. Career and Technical Student Organizations provide activities for students as an integral part of the instruction offered. Other CTSOs not listed in this curriculum framework or recognized by the Florida Department of Education are permissible provided they support student mastery over the standards and benchmarks of this curriculum framework.

Cooperative Training – OJT

On-the-job training is appropriate but not required for this program. Whenever offered, the rules, guidelines, and requirements specified in the OJT framework apply.

Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities as identified on the secondary student's Individual Educational Plan (IEP) or 504 plan or postsecondary student's accommodations' plan to meet individual needs and ensure equal access. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

In addition to accommodations, some secondary students with disabilities (students with an IEP served in Exceptional Student Education (ESE)) will need modifications to meet their needs. Modifications change the outcomes or what the student is expected to learn, e.g., modifying the curriculum of a secondary career and technical education course. Note: postsecondary curriculum and regulated secondary programs cannot be modified.

Some secondary students with disabilities (ESE) may need additional time (i.e., longer than the regular school year), to master the student performance standards associated with a regular course or a modified course. If needed, a student may enroll in the same career and technical course more than once. Documentation should be included in the IEP that clearly indicates that it is anticipated that the student may need an additional year to complete a Career and Technical Education (CTE) course. The student should work on different competencies and new applications of competencies each year toward completion of the CTE course. After achieving the competencies identified for the year, the student earns credit for the course. It is important to ensure that credits earned by students are reported accurately. The district's information system must be designed to accept multiple credits for the same course number for eligible students with disabilities.

Florida Department of Education
Curriculum Framework

Course Title: **Orientation to Nursing**
Course Type: **Orientation/Exploratory**
Career Cluster: **Health Science**

Secondary – Middle School	
Course Number	8417106
CIP Number	0351260302
Grade Level	6-8
Course Length	Semester
Teacher Certification	Refer to the **Course Structure** section.
CTSO	HOSA
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml

Purpose

The purpose of this course is to assist students in making informed decisions regarding their future academic and occupational goals and to provide information regarding careers in the Health Science career cluster. The content includes but is not limited to basic information about the skills required, available, career paths, specializations, financial rewards, occupational hazards, and educational requirements. Information concerning the practices for promoting good health is included. Reinforcement of academic skills occurs through classroom instruction and applied laboratory procedures.

Instruction and learning activities are provided in a laboratory setting using hands-on experiences with the equipment, materials and technology appropriate to the course content and in accordance with current practices.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Course Structure

This program is a planned sequence of instruction consisting of 1 course.

The length of this course is one semester. It may be offered for two semesters when appropriate. When offered for one semester, it is recommended that it be at the exploratory level and more in-depth when offered for two semesters.

To teach the course listed below, instructors must hold at least one of the teacher certifications indicated for that course.

The following table illustrates the course/program structure:

Course Number	Course Title	Teacher Certification	Length
8417106	Orientation to Nursing	REG NURSE 7 G PRAC NURSE @7 %7%G (Must be a Registered Nurse) LPN 7 G	Semester

Standards

After successfully completing this program, the student will be able to perform the following:

01.0 Discuss the history of nursing.
02.0 Discuss personal qualities essential to nurses.
03.0 Demonstrate an awareness of various career pathways for nursing and occupations.
04.0 Identify skills performed by various levels of nursing occupations.
05.0 Identify life stages and the health care needs of each.
06.0 Demonstrate basic communication skills.
07.0 Perform basic mathematical calculations and demonstrate problem solving skills used by nurses.
08.0 Demonstrate an understanding of the principles of wellness and disease.
09.0 Identify the general plan of anatomy and physiology of the human body and perform nursing skills utilized for each system.
10.0 Discuss various job settings for nurses.
11.0 Demonstrate employability skills related to nursing.
12.0 Demonstrate how to take vital signs and analyze the results.
13.0 Perform a basic head to toe assessment & document the findings.

Florida Department of Education
Student Performance Standards

Course Title: **Orientation to Nursing**
Course Number: **8417106**
Course Length: **Semester**

CTE Standards and Benchmarks	
01.0	Discuss the history of nursing. The student will be able to:
01.01	Compare nursing care from ancient times to the present. For example: families, religious orders, wars, modern treatment and equipment.
01.02	Discuss early pioneers in nursing such as Clara Barton and Florence Nightingale.
01.03	Demonstrate knowledge of how advances in science have impacted beliefs and practices from ancient times to the present.
02.0	Discuss personal qualities essential to nurses. The student will be able to:
02.01	Describe the personal traits of an ideal nurse.
02.02	List their own personal traits that would assist them in nursing and those that would need to be improved or developed.
02.03	Discuss the importance of legal and ethical behaviors as related to nursing.
03.0	Demonstrate an awareness of various career pathways for nursing and occupations. The student will be able to:
03.01	Identify and classify what careers fall under the nursing service category and cluster (e.g., C.N.A.s, PCTs, LPNs, ADNs, diploma R.N.s, B.S.N.s, M.S.N.s, PhDs, and DNPs) and identify various pathways to reach these levels.
03.02	List various institutions where training for nursing careers is available.
03.03	Identify types of education and training levels as it relates to nursing services/occupations.
03.04	List the advantages and disadvantages of one occupation including the following factors: job opportunities, salary ranges, fringe benefits, working conditions, and occupational hazards.
04.0	Identify skills performed by various levels of nursing occupations. The student will be able to:
04.01	Identify representative skills of nursing assistants and home health aides.
04.02	Identify representative skills of patient care technicians.
04.03	Identify representative skills of practical nurses.

CTE Standards and Benchmarks	
	04.04 Identify representative skills of professional nurses.
	04.05 Identify representative skills of nursing specialties.
05.0	Identify life stages and the health care needs of each. The student will be able to:
	05.01 Describe common health care needs from birth to death and identify how nurses help address those needs.
	05.02 Identify how nurses promote optimum health.
	05.03 Identify how cultural diversity/transcultural nursing affects health care needs at different life stages.
06.0	Demonstrate basic communication skills. The student will be able to:
	06.01 Demonstrate interpersonal communication skills such as active listening, verbal, non-verbal and written language.
	06.02 Demonstrate the ability to break medical terms into their word parts.
	06.03 Discuss common abbreviations and symbols used in nursing.
	06.04 Identify technology used in Nursing and the proper communication etiquette required for its' use.
07.0	Perform basic mathematical calculations and demonstrate problem solving skills used by nurses. The student will be able to:
	07.01 Describe the importance of why accurate calculations and effective problem solving skills are required.
	07.02 Calculate mathematical problems and measurements related to nursing.
	07.03 Measure artificial medication in various forms, for example syringes or medicine cups.
	07.04 Convert common weights, measure, and volumes to metric as applied in the health care setting.
	07.05 Accurately tell time using both standard and international/military time formats.
08.0	Demonstrate an understanding of the principles of wellness and disease. The student will be able to:
	08.01 Describe how cultural and individual differences in lifestyles relate to wellness and quality of life and how these differences impact health problems of society.
	08.02 Demonstrate an understanding of the risk factors that contribute to illness.
	08.03 Identify consequences of substance abuse and high risk factors.
	08.04 Describe strategies for prevention of diseases including health screenings and examinations.

CTE Standards and Benchmarks
08.05 Explain basic concepts of positive self-image, body and mental wellness and the effect stress has on both.
08.06 Explore the need for proper nutrition and water intake to maintain wellness.
09.0 Identify the general plan of anatomy and physiology of the human body and perform nursing skills utilized for each system. The student will be able to:
09.01 Describe the anatomical position of the body, defining basic body planes and directional terms.
09.02 Describe the anatomy and physiology of the respiratory system. • Describe illnesses/diseases related to the respiratory system. • Perform a basic assessment of respiratory rate and lung sounds.
09.03 Describe the anatomy and physiology of the integumentary system. • Describe illnesses/diseases related to the integumentary system. • Identify the various wounds related to the skin and their treatment.
09.04 Describe the anatomy and physiology of the skeletal system. • Describe illnesses/diseases of the skeletal system. • Identify types of fractures and splint/sling techniques.
09.05 Describe the anatomy and physiology of the muscle system. • Describe illnesses/diseases of the muscular system. • Perform ROM exercises.
09.06 Describe the anatomy and physiology of the digestive system. • Describe illnesses/diseases related to the digestive system. • Assess bowel sounds.
09.07 Describe the anatomy and physiology of the ear. • Describe illnesses/diseases related to the ear. • Perform the Rhinnes and Weber hearing test with a tuning fork. If available, test hearing with an audiometer.
09.08 Describe the anatomy and physiology of the eye. • Describe illnesses/diseases related to the eye. • Perform a vision exam using a Snellen eye chart
09.09 Describe the anatomy and physiology of the nervous system. • Describe illnesses/diseases related to the nervous system. • Perform a reflex exam using a reflex hammer.
09.10 Describe the anatomy and physiology of the circulatory system, including the heart. • Describe illnesses/diseases related to the circulatory system. • Demonstrate how to take a blood pressure.
09.11 Describe the anatomy and physiology of the excretory system. • Describe illnesses/diseases related to the excretory system. • Measure input & output.

CTE Standards and Benchmarks	
	09.12 Describe the anatomy and physiology of the immune system. • Describe the illnesses/disease related to the immune system. • Perform hand washing, • Demonstrate the operation of a microscope. • Demonstrate the streaking of an agar plate.
10.0	Discuss various job settings for nurses. The student will be able to:
	10.01 Recognize various settings that employ nurses.
	10.02 Compare salaries and benefits of various levels of nursing and various employment settings.
	10.03 Discuss pros and cons of nursing jobs in various settings.
11.0	Demonstrate employability skills related to nursing. The student will be able to:
	11.01 Identify skills needed for employment as a nurse.
	11.02 At a minimum, demonstrate the skills used within nursing from the following list: • Basic First Aid and CPR. • Patient menu planning and feeding techniques. • Measure and record temperature, pulse and respiration (TPR). • Use of wheelchairs, crutches and/or walkers. • Perform a weight, height and BMI assessment. • Graph the development of infant/child on a growth chart. • Correctly perform making an occupied and unoccupied bed.
12.0	Demonstrate how to take vital signs and analyze the results. The student will be able to:
	12.01 Demonstrate how to take an oral, temporal, axillary and tympanic temperature and analyze the results.
	12.02 Demonstrate how to take a radial, carotid and apical pulse and analyze the results.
	12.03 Demonstrate how to take respiration and analyze the results.
	12.04 Demonstrate how to take a blood pressure and analyze the results.
13.0	Perform a basic head to toe assessment & document the findings. The student will be able to:
	13.01 Perform a basic head to toe assessment and document the findings using correct terminology.
	13.02 Demonstrate how to take a health history.

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as, experimental, quality, and safety procedures are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate and troubleshoot equipment/tools used to make observations. Students understand measurement error; and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

Florida Standards for English Language Development (ELD)

English language learners communicate for social and instructional purposes within the school setting. ELD.K12.ELL.SI.1

English Language Development (ELD) Standards Special Notes:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. For additional information on the development and implementation of the ELD standards, please contact the Bureau of Student Achievement through Language Acquisition at SALA@fldoe.org.

Special Notes

The purpose of this course is to acquaint students with career opportunities and job requirements in the field of nursing which will enable students to consider career objectives and interests.

Reinforcement of basic skills in English, mathematics, and science appropriate for the job preparatory programs occurs through vocational classroom instruction and applied laboratory procedures or practice.

Special projects that are related to nursing are provided, including role playing activities of daily living as a handicapped individual, developing an emergency evacuation plan for their own home, menu planning and feeding techniques, applying slings, use of wheelchairs, and creating their own nursing career plan. Team teaching and integration of the curriculum with English, Math and Science is encouraged.

Guest speakers from industry make an important contribution to the effectiveness of this course.

Career and Technical Student Organization (CTSO)

CTSOs are co-curricular career and technical student organizations providing leadership training and reinforcing specific career and technical skills. Career and Technical Student Organizations provide activities for students as an integral part of the instruction offered. Other CTSOs not listed in

this curriculum framework or recognized by the Florida Department of Education are permissible provided they support student mastery over the standards and benchmarks of this curriculum framework.

Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities as identified on the secondary student's Individual Educational Plan (IEP) or 504 plan or postsecondary student's accommodations' plan to meet individual needs and ensure equal access. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

In addition to accommodations, some secondary students with disabilities (students with an IEP served in Exceptional Student Education (ESE)) will need modifications to meet their needs. Modifications change the outcomes or what the student is expected to learn, e.g., modifying the curriculum of a secondary career and technical education course. Note: postsecondary curriculum and regulated secondary programs cannot be modified.

Florida Department of Education
Curriculum Framework

Program Title: **Allied Health Assisting**
Program Type: **Career Preparatory**
Career Cluster: **Health Science**

Secondary – Career Preparatory	
Program Number	8417130
CIP Number	0317029903
Grade Level	9-12
Program Length	3 credits
Teacher Certification	Refer to the **Program Structure** section.
CTSO	HOSA
SOC Codes (all applicable)	31-9099 -- Healthcare Support Workers, All Other
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml

Purpose

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Health Science career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of several aspects of Health Science career cluster.

The content includes performing skills representative of one to three areas of allied health care in the laboratory and clinical settings. Major areas of allied health are defined as physical therapy, radiation, laboratory and respiratory medicine, and occupational therapy. **Such competencies must remain at the aide level and not go beyond the scope of practice of unlicensed assistive personnel. Invasive procedures that fall into the nursing scope of practice are not to be added**. Clinical experience is defined as activities performed in the clinical setting under the supervision of a health professional duly certified/licensed in the selected occupational fields. Simulated labs are not a substitute for clinical experience. School certificates for this module must be for “Allied Health Assistant”. Specific competencies may be listed on the back.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Program Structure

This program is a planned sequence of instruction totaling three credits. The two credit Health Science Core (Health Science Anatomy & Physiology 8417100 and Health Science Foundations 8417110) is required as a prerequisite for all programs and options. Secondary students completing the two required core courses will not have to repeat the core in postsecondary.

To teach the courses listed below, instructors must hold at least one of the teacher certifications indicated for that course.

The following table illustrates the secondary program structure:

Course Number	Course Title	Teacher Certification	Length	SOC Code	Level	Graduation Requirement
8417100 **OR**	Health Science Anatomy & Physiology **OR**	ANY HEALTH OCCUP G (See DOE approved list) BIOLOGY 1	1 credit	31-9099	3	EQ
2000350 **OR** 2000360	Anatomy and Physiology **OR** Anatomy and Physiology Honors	SCIENCE @4 HEALTH 6 BIOLOGY 1 HEALTH ED @4				
8417110	Health Science Foundations	ANY HEALTH OCCUP G (See DOE approved list)	1 credit	31-9099	3	CT
8417131	Allied Health Assisting 3	ANY HEALTH OCCUP G (See DOE approved list)	1 credit	31-9099	2	CT

(Graduation Requirement Codes: CT= Career & Technical Education, EQ= Equally Rigorous Science, EC= Economics, MA= Mathematics, PL= Personal Financial Literacy)

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Florida's Career Readiness Skills for CTE Programs

Employability Skills	
01.0	Apply academic skills to workplace scenarios.
01.01	Use reading skills.
01.02	Use writing skills.
01.03	Use mathematical strategies and procedures.
01.04	Use scientific principles and procedures.
02.0	Design a solution to an industry problem.
02.01	Use critical thinking.
02.02	Use creativity.
02.03	Make sound decisions.
02.04	Solve problems.
02.05	Reason.
02.06	Plan and organize.
03.0	Manage resources within an industry project
03.01	Manage time.
03.02	Manage money or resources.
03.03	Manage materials.
03.04	Manage personnel.
04.0	Oversee the subcomponents, operations and output of a technical or organizational system.
04.01	Manage systems.
04.02	Monitor systems.
04.03	Improve systems.
05.0	Use information for decision making.
05.01	Locate information.
05.02	Organize information.
05.03	Use information.

	05.04 Analyze information.
	05.05 Communicate information.
06.0	Apply relevant technology to workplace scenarios to aid productivity.
	06.01 Use technology.
07.0	Interpret and express interpersonal communication.
	07.01 Communicate verbally.
	07.02 Listen actively.
	07.03 Comprehend written material.
	07.04 Convey information in writing.
	07.05 Communicate nonverbally.
	07.06 Interpret nonverbal communication.
08.0	Interact with others to accomplish workplace goals.
	08.01 Collaborate with others in a team.
	08.02 Respond to customer needs.
	08.03 Exercise leadership.
	08.04 Negotiate to resolve conflict.
	08.05 Respect others.
09.0	Manage personal behavior to maximize productivity and professional growth.
	09.01 Demonstrate responsibility and self-discipline.
	09.02 Adapt and show flexibility.
	09.03 Work independently.
	09.04 Demonstrate a willingness to learn.
	09.05 Demonstrate integrity.
	09.06 Demonstrate professionalism.
	09.07 Take initiative.
	09.08 Display positive attitude.
	09.09 Take responsibility for professional growth.

Career Exploration & Planning	
10.0	Explain career opportunities aligned with the regional economy and personal aspirations.
10.01	Describe regional occupations that are high-demand, high-growth, high-wage and/or high-skill.
10.02	Describe careers aligned with his or her interests, skills and values based on career assessment, experiential learning, career informational interviews, research and/or reflection.
11.0	Explain postsecondary pathways aligned with his or her career aspirations.
11.01	Compare and contrast postsecondary pathways, including education, employment, entrepreneurship and enlistment (the “Four Es”).
11.02	Compare and contrast regional postsecondary training provider options, including apprenticeships, technical colleges, state colleges, universities and industry-recognized certification providers.
11.03	Define postsecondary credentialing and stacking options, including industry-recognized certifications, apprenticeship certificates of completion, career certificates, licenses and associate or baccalaureate degrees.
11.04	Compare postsecondary training data for training programs of interest, such as total costs, average student loan debt, and median earnings and job placement rates after program completion.
12.0	Develop a personalized career and academic plan.
12.01	Prioritize an occupation, credential and postsecondary training provider for plan formation.
12.02	Self-assess progress toward meeting graduation requirements and skill-development goals.
12.03	Develop and complete a chronological checklist of steps and deadlines prior to postsecondary training or national service application that includes any required documentation to gather, writing prompts and examinations.
12.04	Identify a variety of financial aid opportunities, including scholarships, grants, savings, work, work-study programs, private loans and federal loans.
12.05	Develop a postsecondary training budget that is inclusive of living and school expenses.
Job Attainment	
13.0	Find, assess and apply to job opportunities.
13.01	Identify online job posts relevant to his or her career aspirations.
13.02	Compare and contrast the job posts’ required qualifications, job duties, compensation, benefits and employers.
13.03	Define what information, documentation and writing prompts are required for the positions.
14.0	Communicate personal competence, character and fit for a job opportunity.
14.01	Develop a resume.
14.02	Write a cover letter.
14.03	Curate a professional portfolio that includes work products.
14.04	Prepare for and experience a mock job interview.

15.0	Cultivate and leverage relationships to professionally advance.
	15.01 Request a signed reference letter, letter of recommendation and/or an online skill/professionalism endorsement.
	15.02 Develop a plan to cultivate a professional digital footprint.
	15.03 Develop a networking plan for a specific industry of interest.

Standards

After successfully completing this program, the student will be able to perform the following:

Health Science Core

01.0 Analyze and interpret an overview of the human body, including organization and chemical process.
02.0 Apply correct medical terminology relating to body structure and function within a real-world application.
03.0 Evaluate cells and tissues microscopically and macroscopically and relate their specialized functions.
04.0 Analyze the integumentary system in relation to health and disease.
05.0 Analyze the skeletal system in relation to health and disease.
06.0 Analyze the muscular system in relation to health and disease.
07.0 Analyze the nervous system in relation to health and disease.
08.0 Analyze the endocrine system in relation to health and disease.
09.0 Analyze the cardiovascular/circulatory system in relation to health and disease.
10.0 Analyze the lymphatic and immune systems in relation to health and disease.
11.0 Analyze the respiratory system in relation to health and disease.
12.0 Analyze the digestive system in relation to health and disease.
13.0 Analyze the urinary system in relation to health and disease.
14.0 Analyze both the male and female reproductive systems in relation to health and disease.
15.0 Identify and explain factors relating to genetics and disease.
16.0 Evaluate and apply the principles of disease transmission and control to real-world scenarios.
17.0 Demonstrate knowledge of the healthcare delivery system and health occupations.
18.0 Demonstrate the ability to communicate and use interpersonal skills effectively.
19.0 Demonstrate legal and ethical responsibilities.
20.0 Demonstrate an understanding of and apply wellness and disease concepts.
21.0 Recognize and practice safety and security procedures.
22.0 Recognize and respond to emergency situations.
23.0 Recognize and practice infection control procedures.
24.0 Demonstrate an understanding of information technology applications in healthcare.
25.0 Demonstrate employability skills.
26.0 Demonstrate knowledge of blood borne diseases, including HIV/AIDS.
27.0 Apply basic math and science skills.

Allied Health Assisting 3

28.0 Perform skills representative of at least one (1) to three (3) major allied health areas in the school laboratory before beginning the observational phase.
29.0 Successfully complete an observational rotation in at least one (1) to three (3) major allied health areas.

Florida Department of Education
Student Performance Standards

Health Science Core

The first two courses in this program are referred to as the Health Science Core and consist of the courses Health Science Anatomy & Physiology (8417100) and Health Science Foundations (8417110). **To ensure consistency whenever these courses are offered, the standards and benchmarks for the health science core have been placed in a separate document. To access this document, visit this link:** https://www.fldoe.org/file/20894/health-sci-core-secondary-2627.rtf

The two-credit core is required as a prerequisite for all secondary programs except for Practical Nursing and Pharmacy Technician. Secondary students completing the two required courses will not have to repeat the core in postsecondary. When the recommended sequence is followed, the structure allows students to complete at specified courses for employment or remain for advanced training or cross-training.

Course Title: **Health Science Anatomy & Physiology**
Course Number: **8417100**
Course Credit: **1**

Course Description:

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as, experimental quality, and safety procedures will be an integral part of this course. Students will interact with materials and primary sources of data or with secondary sources of data to observe and understand the natural world. Students will develop an understanding of measurement error, and develop the skills to aggregate, interpret, and present the data and resulting conclusions. Equipment and supplies will be provided to enhance these hands-on experiences for students. A minimum of 20% of classroom time will be dedicated to laboratory experiences.

This course is part of the secondary Health Core consisting of an overview of the human body, both structurally and functionally with emphasis on the pathophysiology and transmission of disease. Medical terminology is an integral part of the course.

The course *Anatomy and Physiology (2000350) or Anatomy and Physiology Honors (2000360)* may be substituted for the course Health Science Anatomy & Physiology (8417100) and their standards can be found at www.cpalms.org.

The course Health Science Anatomy & Physiology (8417100) is designated as an equally rigorous (EQ) science credit.

Course Title: **Health Science Foundations**
Course Number: **8417110**
Course Credit: **1**

Course Description:
This course is part of the Secondary Health Core designed to provide the student with an in depth knowledge of the health care system and associated occupations. Emphasis is placed on communication and interpersonal skills, use of technology, ethics and the development of critical thinking and problem solving skills. Students may shadow professionals throughout the course.

Florida Department of Education
Student Performance Standards

Course Title: **Allied Health Assisting 3**
Course Number: **8417131**
Course Credit: **1**

Course Description:

In this course, students will perform skills representative of one to three areas of allied health care in the laboratory and clinical settings.

CTE Standards and Benchmarks	
28.0	Perform skills representative of 1-3 major allied health areas in the school laboratory before beginning the observational phase. The student will be able to:
28.01	If clinical laboratory aide type skills is one of the selected allied health areas to be taught, only procedures that are exempt from clinical laboratory personnel licensure requirements will be presented and students will:
•	Perform waived testing on blood and urine.
•	Describe the process for preparing a blood slides for differential blood count.
•	Report urine specific gravity, color and characteristics.
•	Perform centrifuge operation and maintenance. (OPTIONAL)
•	Identify and explain the use of the common instruments/equipment found in the clinical laboratory.
•	Explain specimen differentiation.
•	Perform communication skills specifically related to laboratory science.
•	Discuss the process of performing various venipunctures.
•	Name and discuss the specialty areas within laboratory (hematology, clinical chemistry, microbiology, etc.).
•	Explain the criteria set forth in CLIA to classify laboratory testing as waived, moderate complexity or high complexity.
•	Explain the levels and qualifications for testing personnel as set forth in CLIA (complexity based) and as established by state law (licensure categories).
28.02	If physical restorative aide type skills is one of the selected allied health areas to be taught, students will:
•	Describe the functions of bones and muscles as related to the practice of physical therapy.

CTE Standards and Benchmarks
• Define disability and identify types of disabilities.
• Name and discuss the pathways of physical therapy practice.
• Describe equipment used in physical therapy.
• Perform safe body mechanics and transfer
• Demonstrate an understanding of the use of modalities (i.e., Ultrasound, heat and cold therapeutic massage, E-STEM, wound care, elastic stockings, etc.).
• Describe the process of hydrotherapy.
• Perform communication skills specifically related to physical therapy aide.
• Identify, describe, and demonstrate the use of devices such as crutches, walkers, canes, and wheelchairs, etc.
• Demonstrate techniques used in active and passive range of motion exercises.
• Instruct patients in bed/wheelchair mobility.
• Describe the relationship between long-term and short-term goals.
28.03 If occupational restorative aide type skills is one of the selected allied health areas to be taught, students will:
• Assist clients to eat using prompting.
• Identify augmented communication devices and purposes of each.
• Describe equipment used in occupational therapy.
• Describe the splint making process.
• Perform feeding and dressing skills using adaptive equipment.
• Perform feeding and dressing skills using one hand.
• Perform communication skills specifically related to occupational therapy.
• Perform and instruct range of motion exercises.
• Name and discuss the pathways of occupational therapy practice.
• Educate the client in activities of daily living skills such as clothing care skills, food preparation, and money management, etc.

CTE Standards and Benchmarks
28.04 If respiratory restorative aide type skills is one of the selected allied health areas to be taught, students will:
• Name and discuss the pathways of respiratory care practice.
• Describe common respiratory diseases (asthma, emphysema, chronic bronchitis, and atelectasis, etc.) and common medications used to treat respiratory diseases.
• Recognize normal breath sounds when auscultating the chest with a stethoscope.
• Describe the use of oxygen flow regulating equipment.
• Demonstrate and discuss the use of incentive spirometers.
• Differentiate between various oxygen delivery devices (nasal cannulas, simple and re-breathing masks, oxy-hoods, and enclosures, etc.).
• Check emergency equipment assigned to respiratory care.
• Discuss the use of postural drainage and percussion.
• Discuss and practice the use of the pulse oximeter.
• Describe the equipment and use of humidity/aerosol.
28.05 If medical administrative assisting type skills is one of the selected allied health areas to be taught, students will:
• Demonstrate an understanding of basic medical terminology e.g., prefixes, suffixes, abbreviations, and root words related to major body systems.
• Demonstrate an understanding of straight numerical, alphabetical and terminal digit filing.
• Demonstrate computer literacy, keyboarding and retrieval skills.
• List procedures for scheduling and referring patients, handling walk-in emergency patients, and telephone etiquette.
• Understand what is required to create and submit a medical bill
• Define a release of medical information, explanation of benefit, assignment of benefit, and electronic remittance advice.
• Develop an understanding of healthcare coverage and be able to interpret the information contained on the patient's insurance card.
• Discuss the various types of medical records such as electronic health record (EHR), digital records, and paper records with regard to content and security.
• Understand the financial terms and procedures involved in operating a medical office practice including, income, expense, accounts receivable, accounts payable, cash and accrual accounting, write-off adjustments.

CTE Standards and Benchmarks
28.06 If radiologic aide type skills is one of the selected allied health areas to be taught, students will:
• Compare and contrast the development of x-rays through digital media or through film.
• Identify the function of a cassette, film, and screen.
• Describe how radiation produces an image on film and through digital technology.
• Identify the process by which x-ray film is developed.
• Identify anatomical position and terminology medial, lateral, superior, inferior, anterior/ventral, and posterior/dorsal).
• Identify patient properly to include doing the correct procedure on the correct patient in the right location (check identification band, etc.).
• Explain appropriate exam(s) to the patient.
• Perform safe body mechanics and transferring skills of patient onto x-ray table.
• Position patient for exam(s) (chest, KUB, hand and foot, etc.).
• Position x-ray tube to simulate exposure for exam(s) (chest, KUB, hand, and foot, etc.).
• Position patient in supine, prone, lateral, oblique, AP, PA, etc. of appropriate part.
28.07 If geriatric aide type skills are to be taught, students will:
• Recognize types of long term care facilities and levels of care.
• Be familiar with legislation affecting long-term care.
• Discuss physical and emotional effects of aging and appropriate ways of dealing with them.
• Recognize the stages of dementia and the care of residents in each stage.
• Discuss reality orientation, reminiscing, and validation therapy.
• Describe ways to meet the nutritional needs through diet, dietary supplements, and mechanisms to provide supplements.
• Provide for the safety of the elderly and chronically ill patient, including prevention of falls, prevention of infections, provision of a safe environment and prompt attendance to patients' needs, etc.
• Check integrity of patient's skin condition and take appropriate actions when needed.
• Recognize common chronic illnesses and the special care required.

CTE Standards and Benchmarks
• Provide appropriate end of life care.
• Describe common medications taken by the elderly and chronically ill, their effects, and side effects.
28.08 If electrocardiograph technician skills are to be taught, students will:
• Describe the cardiovascular system.
○ Correlate the anatomy of the heart to the placement of leads for an EKG including special needs populations.
○ Correlate the electrical conduction system of the heart to the rhythms.
○ Compare and contrast polarization, depolarization and repolarization as it applies to patient care scenarios.
○ Describe the usual pattern of electrical flow through the conduction system including the five major areas and physical layout.
○ Give the inherent rates for the SA node, the AV junction, and the ventricles.
• Demonstrate an understanding of the role and responsibilities of the EKG tech.
○ Recognize and practice legal and ethical responsibilities as they relate to an EKG tech.
○ Prepare and maintain all EKG equipment
○ Identify patient and verify the requisition order.
○ State precautions required when performing diagnostic procedures.
○ Recognize a cardiac emergency.
• Demonstrate knowledge of, apply and use medical instrumentation modalities.
○ Calculate a patient's heart rate from the EKG tracing (for example 6-second method).
○ Perform a 12 lead EKG.
• Recognize normal and abnormal monitoring.
28.09 If biomedical research type skills is one of the selected allied health areas to be taught, students will:
• Comprehend technical vocabulary.
• Document lab results accurately.

CTE Standards and Benchmarks	
	• Recognize hazardous lab conditions.
	• Maintain safe work environment, including but not limited to correct handling, storing, and disposing of hazardous materials, and use of personal protective equipment, etc.
	• Research regulatory bodies (OSHA, NIH, NR, DOT, EPA, CDC, NRC, CLIA, DEA and FDA, etc.).
	• Discuss testing methods and inspection procedures in relation to quality control.
	• Discuss environmental conditions of research facility (growth chamber, greenhouse, seed storage room, animal housing or manufacturing site).
	• Discuss the proper utilization of test plants and animals.
	• Prepare solutions and reagents for laboratory use.
	• Operate laboratory equipment.
	• Identify common microorganisms.
	• Explain how to culture and perform bioassays.
	• Discuss genetic engineering skills.
	• Utilize problem-solving skills.
	• Practice asepsis.
	• Discuss sterilization techniques, including proper packaging of sterile goods.
29.0	Successfully complete an observational rotation in at least one (1) to Three (3) major allied health areas. The student will be able to:
	29.01 Observe skills in the clinical setting as outlined in the above standard.
	29.02 Complete One (1) - three (3) observational rotations under the supervision of a duly licensed/certified allied health care professional.
	29.03 Exhibit behavior consistent with the professional ethics required of each of the allied health areas being studied.

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as, experimental, quality, and safety procedures are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate and troubleshoot equipment/tools used to make observations. Students understand measurement error; and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

This program requires a clinical component of approximately 50% the length of the courses following the health science core. A portion of the clinical experience can be achieved through simulation when appropriate.

Clinical courses require contact hours in the clinical setting in order to complete the health science program. Hospitals, nursing homes, and other clinical facilities with clinical affiliation agreements limit the number of students that can rotate and/or be on site at one time. Most facilities, including hospitals and nursing homes, limit the number of students to 15. Due to these industry limitations, it is recommended that the student ratio be 15:1 (student/teacher) based on the clinical facilities that students attend to for clinical training.

Florida Standards for English Language Development (ELD)

English language learners communicate for social and instructional purposes within the school setting. ELD.K12.ELL.SI.1

English Language Development (ELD) Standards Special Notes:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. For additional information on the development and implementation of the ELD standards, please contact the Bureau of Student Achievement through Language Acquisition at sala@fldoe.org.

Special Notes

For each skill set, the teacher certification used must also be able to teach programs that encompass the competencies being taught. The teacher certifications that teach the individual skill sets should be experienced and capable in the skills themselves in order to teach.

Following the completion of the Health Science Anatomy and Physiology and Health Science Foundations courses, the student is eligible to take the National Health Care Foundation Skill Standards Assessment with instructor approval and the completion of a portfolio.

This program meets the Department of Health's education requirements for HIV/AIDS, Domestic Violence and Prevention of Medical Errors. Although not a requirement for initial licensure, it is a requirement for renewal, therefore the instructor **may** provide a certificate for renewal purposes to the student verifying these requirements have been met.

If students in this program are seeking a licensure, certificate or registration through the Department of Health, please refer to 456.0635, F.S. for more information on disqualification for a license, certificate, or registration through the Department of Health.

Career and Technical Student Organization (CTSO)

CTSOs are co-curricular career and technical student organizations providing leadership training and reinforcing specific career and technical skills. Career and Technical Student Organizations provide activities for students as an integral part of the instruction offered. Other CTSOs not listed in this curriculum framework or recognized by the Florida Department of Education are permissible provided they support student mastery over the standards and benchmarks of this curriculum framework.

Cooperative Training – OJT

On-the-job training is appropriate but not required for this program. Whenever offered, the rules, guidelines, and requirements specified in the OJT framework apply.

Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities as identified on the secondary student's Individual Educational Plan (IEP) or 504 plan or postsecondary student's accommodations' plan to meet individual needs and ensure equal access. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

In addition to accommodations, some secondary students with disabilities (students with an IEP served in Exceptional Student Education (ESE) will need modifications to meet their needs. Modifications change the outcomes or what the student is expected to learn, e.g., modifying the curriculum of a secondary career and technical education course. Note: postsecondary curriculum and regulated secondary programs cannot be modified.

Some secondary students with disabilities (ESE) may need additional time (i.e., longer than the regular school year), to master the student performance standards associated with a regular course or a modified course. If needed, a student may enroll in the same career and technical course more than once. Documentation should be included in the IEP that clearly indicates that it is anticipated that the student may need an additional year to complete a Career and Technical Education (CTE) course. The student should work on different competencies and new applications of competencies each year toward completion of the CTE course. After achieving the competencies identified for the year, the student earns credit for the course. It is important to ensure that credits earned by students are reported accurately. The district's information system must be designed to accept multiple credits for the same course number for eligible students with disabilities.

Florida Department of Education
Curriculum Framework

Program Title: **Dental Aide**
Program Type: **Career Preparatory**
Career Cluster: **Health Science**

Secondary – Career Preparatory	
Program Number	8417140
CIP Number	0351060103
Grade Level	9-12
Program Length	3 credits
Teacher Certification	Refer to the **Program Structure** section.
CTSO	HOSA
SOC Codes (all applicable)	31-9099 -- Healthcare Support Workers, All Other
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml

Purpose

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Health Science career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of Health Science career cluster.

This program is designed to provide classroom theory and practical application in tasks related to dental office asepsis and sterilization and disinfection procedures in the dental environment. It is designed to prepare students for employment as dental aides specializing as dental sterilization technicians (industry title) SOC 31-9099 (Healthcare Support Workers, all other) in a dental office or clinic, or to pursue advanced postsecondary dental science education.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Program Structure

This program is a planned sequence of instruction totaling three credits. The two credit Health Science Core (Health Science Anatomy & Physiology 8417100 and Health Science Foundations 8417110) is required as a prerequisite for all programs and options. Secondary students completing the two required core courses will not have to repeat the core in postsecondary.

To teach the courses listed below, instructors must hold at least one of the teacher certifications indicated for that course.

The following table illustrates the secondary program structure:

Course Number	Course Title	Teacher Certification	Length	SOC Code	Level	Graduation Requirement
8417100 **OR**	Health Science Anatomy & Physiology **OR**	ANY HEALTH OCCUP G (See DOE approved list) BIOLOGY 1	1 credit	31-9099	3	EQ
2000350 **OR** *2000360*	*Anatomy and Physiology* **OR** *Anatomy and Physiology Honors*	SCIENCE @4 HEALTH 6 BIOLOGY 1 HEALTH ED @4				
8417110	Health Science Foundations	ANY HEALTH OCCUP G (See DOE approved list)	1 credit	31-9099	3	CT
8417141	Dental Aide 3	DENTL ASST @7 7G	1 credit	31-9099	3	CT

(Graduation Requirement Codes: CT= Career & Technical Education, EQ= Equally Rigorous Science, EC= Economics, MA= Mathematics, PL= Personal Financial Literacy)

Florida's Career Readiness Skills for CTE Programs

Employability Skills	
01.0	Apply academic skills to workplace scenarios.
01.01	Use reading skills.
01.02	Use writing skills.
01.03	Use mathematical strategies and procedures.
01.04	Use scientific principles and procedures.
02.0	Design a solution to an industry problem.
02.01	Use critical thinking.
02.02	Use creativity.
02.03	Make sound decisions.
02.04	Solve problems.
02.05	Reason.
02.06	Plan and organize.
03.0	Manage resources within an industry project
03.01	Manage time.
03.02	Manage money or resources.
03.03	Manage materials.
03.04	Manage personnel.
04.0	Oversee the subcomponents, operations and output of a technical or organizational system.
04.01	Manage systems.
04.02	Monitor systems.
04.03	Improve systems.
05.0	Use information for decision making.
05.01	Locate information.
05.02	Organize information.
05.03	Use information.

	05.04 Analyze information.
	05.05 Communicate information.
06.0	Apply relevant technology to workplace scenarios to aid productivity.
	06.01 Use technology.
07.0	Interpret and express interpersonal communication.
	07.01 Communicate verbally.
	07.02 Listen actively.
	07.03 Comprehend written material.
	07.04 Convey information in writing.
	07.05 Communicate nonverbally.
	07.06 Interpret nonverbal communication.
08.0	Interact with others to accomplish workplace goals.
	08.01 Collaborate with others in a team.
	08.02 Respond to customer needs.
	08.03 Exercise leadership.
	08.04 Negotiate to resolve conflict.
	08.05 Respect others.
09.0	Manage personal behavior to maximize productivity and professional growth.
	09.01 Demonstrate responsibility and self-discipline.
	09.02 Adapt and show flexibility.
	09.03 Work independently.
	09.04 Demonstrate a willingness to learn.
	09.05 Demonstrate integrity.
	09.06 Demonstrate professionalism.
	09.07 Take initiative.
	09.08 Display positive attitude.
	09.09 Take responsibility for professional growth.

Career Exploration & Planning	
10.0	Explain career opportunities aligned with the regional economy and personal aspirations.
10.01	Describe regional occupations that are high-demand, high-growth, high-wage and/or high-skill.
10.02	Describe careers aligned with his or her interests, skills and values based on career assessment, experiential learning, career informational interviews, research and/or reflection.
11.0	Explain postsecondary pathways aligned with his or her career aspirations.
11.01	Compare and contrast postsecondary pathways, including education, employment, entrepreneurship and enlistment (the “Four Es”).
11.02	Compare and contrast regional postsecondary training provider options, including apprenticeships, technical colleges, state colleges, universities and industry-recognized certification providers.
11.03	Define postsecondary credentialing and stacking options, including industry-recognized certifications, apprenticeship certificates of completion, career certificates, licenses and associate or baccalaureate degrees.
11.04	Compare postsecondary training data for training programs of interest, such as total costs, average student loan debt, and median earnings and job placement rates after program completion.
12.0	Develop a personalized career and academic plan.
12.01	Prioritize an occupation, credential and postsecondary training provider for plan formation.
12.02	Self-assess progress toward meeting graduation requirements and skill-development goals.
12.03	Develop and complete a chronological checklist of steps and deadlines prior to postsecondary training or national service application that includes any required documentation to gather, writing prompts and examinations.
12.04	Identify a variety of financial aid opportunities, including scholarships, grants, savings, work, work-study programs, private loans and federal loans.
12.05	Develop a postsecondary training budget that is inclusive of living and school expenses.
Job Attainment	
13.0	Find, assess and apply to job opportunities.
13.01	Identify online job posts relevant to his or her career aspirations.
13.02	Compare and contrast the job posts’ required qualifications, job duties, compensation, benefits and employers.
13.03	Define what information, documentation and writing prompts are required for the positions.
14.0	Communicate personal competence, character and fit for a job opportunity.
14.01	Develop a resume.
14.02	Write a cover letter.
14.03	Curate a professional portfolio that includes work products.
14.04	Prepare for and experience a mock job interview.

15.0	Cultivate and leverage relationships to professionally advance.
	15.01 Request a signed reference letter, letter of recommendation and/or an online skill/professionalism endorsement.
	15.02 Develop a plan to cultivate a professional digital footprint.
	15.03 Develop a networking plan for a specific industry of interest.

Standards

After successfully completing this program, the student will be able to perform the following:

Health Science Core

01.0 Analyze and interpret an overview of the human body, including organization and chemical process.
02.0 Apply correct medical terminology relating to body structure and function within a real-world application.
03.0 Evaluate cells and tissues microscopically and macroscopically and relate their specialized functions.
04.0 Analyze the integumentary system in relation to health and disease.
05.0 Analyze the skeletal system in relation to health and disease.
06.0 Analyze the muscular system in relation to health and disease.
07.0 Analyze the nervous system in relation to health and disease.
08.0 Analyze the endocrine system in relation to health and disease.
09.0 Analyze the cardiovascular/circulatory system in relation to health and disease.
10.0 Analyze the lymphatic and immune systems in relation to health and disease.
11.0 Analyze the respiratory system in relation to health and disease.
12.0 Analyze the digestive system in relation to health and disease.
13.0 Analyze the urinary system in relation to health and disease.
14.0 Analyze both the male and female reproductive systems in relation to health and disease.
15.0 Identify and explain factors relating to genetics and disease.
16.0 Evaluate and apply the principles of disease transmission and control to real-world scenarios.
17.0 Demonstrate knowledge of the healthcare delivery system and health occupations.
18.0 Demonstrate the ability to communicate and use interpersonal skills effectively.
19.0 Demonstrate legal and ethical responsibilities.
20.0 Demonstrate an understanding of and apply wellness and disease concepts.
21.0 Recognize and practice safety and security procedures.
22.0 Recognize and respond to emergency situations.
23.0 Recognize and practice infection control procedures.
24.0 Demonstrate an understanding of information technology applications in healthcare.
25.0 Demonstrate employability skills.
26.0 Demonstrate knowledge of blood borne diseases, including HIV/AIDS.
27.0 Apply basic math and science skills.

Dental Aide 3

28.0 Use dental terminology.
29.0 Identify structures and explain functions and pathologies of dental anatomy.
30.0 Identify disease prevention and perform infection control procedures.
31.0 Describe the legal and ethical responsibilities of the dental health care worker.
32.0 Identify, describe, and maintain dental instruments and equipment.

33.0 Identify properties and uses of dental materials which include gypsum, restorative material, acrylics, dental cements, impression materials and waxes.
34.0 Describe basic dental laboratory procedures.
35.0 Describe dental assisting duties.
36.0 Identify specialty dental procedures.
37.0 Identify dental business office procedures.

Florida Department of Education
Student Performance Standards

Health Science Core

The first two courses in this program are referred to as the Health Science Core and consist of the courses Health Science Anatomy & Physiology (8417100) and Health Science Foundations (8417110). **To ensure consistency whenever these courses are offered, the standards and benchmarks for the health science core have been placed in a separate document. To access this document, visit this link:** https://www.fldoe.org/file/20894/health-sci-core-secondary-2627.rtf

The two credit core is required as a prerequisite for all secondary programs except for Practical Nursing and Pharmacy Technician. Secondary students completing the two required courses will not have to repeat the core in postsecondary. When the recommended sequence is followed, the structure allows students to complete at specified courses for employment or remain for advanced training or cross-training.

Course Title: **Health Science Anatomy & Physiology**
Course Number: **8417100**
Course Credit: **1**

Course Description:

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as, experimental quality, and safety procedures will be an integral part of this course. Students will interact with materials and primary sources of data or with secondary sources of data to observe and understand the natural world. Students will develop an understanding of measurement error, and develop the skills to aggregate, interpret, and present the data and resulting conclusions. Equipment and supplies will be provided to enhance these hands-on experiences for students. A minimum of 20% of classroom time will be dedicated to laboratory experiences.

This course is part of the secondary Health Core consisting of an overview of the human body, both structurally and functionally with emphasis on the pathophysiology and transmission of disease. Medical terminology is an integral part of the course.

The course Anatomy and Physiology (2000350) or Anatomy and Physiology Honors (2000360) may be substituted for the course Health Science Anatomy & Physiology (8417100) and their standards can be found at www.cpalms.org.

The course Health Science Anatomy & Physiology (8417100) is designated as an equally rigorous (EQ) science credit.

Course Title: **Health Science Foundations**
Course Number: **8417110**
Course Credit: **1**

Course Description:
This course is part of the Secondary Health Core designed to provide the student with an in depth knowledge of the health care system and associated occupations. Emphasis is placed on communication and interpersonal skills, use of technology, ethics and the development of critical thinking and problem solving skills. Students may shadow professionals throughout the course.

Florida Department of Education
Student Performance Standards

Course Title: **Dental Aide 3**
Course Number: **8417141**
Course Credit: **1**

Course Description:

This course provides classroom theory and practical application in tasks related to dental office asepsis and sterilization and disinfection procedures in the dental environment. It is designed to prepare completers for employment as dental aides specializing as dental sterilization technicians. It also provides an introduction to dentistry and dental assisting.

CTE Standards and Benchmarks	
28.0	Use dental terminology. The student will be able to:
28.01	Identify and define common dental terms.
28.02	Demonstrate the use of proper dental terminology in the dental environment.
29.0	Identify structures and explain functions and pathologies of dental and general head and neck anatomy. The student will be able to:
29.01	Identify structures and functions of head and neck anatomy including bones, muscles, sinuses, salivary glands, nerves and blood vessels. Identify embryonic development of head, oral cavity, and teeth.
29.02	Identify teeth and their landmarks.
29.03	Describe the histological components of the head, oral cavity, and elements of the teeth and supporting structures.
29.04	Recognize and describe oral pathological conditions.
30.0	Identify principles of microbiology and disease prevention and perform infection control procedures. The student will be able to:
30.01	Differentiate between pathogenic and non-pathogenic microorganisms.
30.02	Describe pathogens and modes of disease transmission.
30.03	Differentiate between aseptic and non-aseptic environments.
30.04	Perform aseptic handwashing technique.
30.05	Describe and apply methods of cleaning, disinfection and sterilization.

CTE Standards and Benchmarks	
	30.06 Identify chemicals and their uses for controlling the spread of disease in the dental environment.
	30.07 Identify and practice the current CDC guidelines for infection control in dental healthcare settings.
	30.08 Describe the duties of the dental office safety coordinator.
	30.09 Identify areas of the OSHA Blood borne Pathogens Standard (29CFR-1910.1030) applicable to the dental office environment.
31.0	Describe the legal and ethical responsibilities of the dental health care worker. The student will be able to:
	31.01 Define commonly used legal vocabulary relating to dentistry.
	31.02 Describe legal and ethical consideration/obligations in the dental team-patient relationship.
	31.03 Explain risk management.
	31.04 Identify areas of Florida Statute 466 and Rule 64B5-16, FAC applicable to practice by the dental health workers.
32.0	Identify, describe, and maintain dental instruments and equipment. The student will be able to:
	32.01 Identify various types, functions, and operations of dental operatory and laboratory equipment.
	32.02 Identify types and functions of operative, restorative, surgical, prosthodontic, orthodontic and endodontic dental instruments.
	32.03 Maintain dental operatory equipment and instruments.
	32.04 Identify types and functions of specific dental hygiene instruments with emphasis on category rather than individual instruments.
33.0	Identify properties and uses of dental materials which include gypsum, restorative material, acrylics, dental cements, impression materials, and waxes. The student will be able to:
	33.01 Demonstrate an understanding of the composition of dental materials, their physical properties and chemical properties and the manner in which the properties relate to manipulation.
	33.02 Describe the manipulative skills necessary to properly prepare dental materials for use both intraorally and extra orally.
	33.03 Identify the primary objectives of the Council on Dental Materials and Devices of the American Dental Association.
	33.04 Identify organizations responsible for establishing standards for dental materials.
	33.05 Describe the physical conditions in the oral cavity which influence the selection of dental materials.
	33.06 Describe the biological characteristics of dental materials which may limit their use in the oral cavity.

CTE Standards and Benchmarks	
	33.07 List factors which must be considered when selecting dental materials.
	33.08 Define terms related to dental materials and science.
34.0	Describe basic dental laboratory procedures. The student will be able to:
	34.01 Identify properties and manipulate gypsum.
	34.02 Identify properties and manipulate impression materials.
	34.03 Identify properties and manipulate extra orally used waxes.
	34.04 Perform laboratory infection control.
35.0	Describe dental assisting duties. The student will be able to:
	35.01 Describe and demonstrate procedures used to evacuate and maintain the operating field.
	35.02 Assemble instruments for general/and specialty dental procedures.
36.0	Identify specialty dental procedures. The student will be able to:
	36.01 Identify and describe oral maxillofacial surgery.
	36.02 Identify and describe orthodontics.
	36.03 Identify and describe periodontics.
	36.04 Identify and describe prosthodontics.
	36.05 Identify and describe pedodontics.
	36.06 Identify and describe endodontics.
	36.07 Identify and describe public health dentistry.
37.0	Identify dental business office procedures. The student will be able to:
	37.01 Describe appointment control.
	37.02 Describe an active recall system.
	37.03 Describe steps for maintaining accurate patient records.

CTE Standards and Benchmarks
37.04 Describe steps for maintaining patient financial records and collecting fees.
37.05 Describe methods of dental office inventory control.
37.06 Describe public relations responsibilities of the secretary/receptionist.
37.07 Identify skills required for operating on office equipment.
37.08 Describe an optimal dental office environment.

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as, experimental, quality, and safety procedures are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate and troubleshoot equipment/tools used to make observations. Students understand measurement error; and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students

This program requires a clinical component of approximately 50% the length of the courses following the health science core. A portion of the clinical experience can be achieved through simulation when appropriate.

Clinical courses require contact hours in the clinical setting in order to complete the health science program. Hospitals, nursing homes, and other clinical facilities with clinical affiliation agreements limit the number of students that can rotate and/or be on site at one time. Most facilities, including hospitals and nursing homes, limit the number of students to 15. Due to these industry limitations, it is recommended that the student ratio be 15:1 (student/teacher) based on the clinical facilities that students attend to for clinical training.

Florida Standards for English Language Development (ELD)

English language learners communicate for social and instructional purposes within the school setting. ELD.K12.ELL.SI.1

English Language Development (ELD) Standards Special Notes:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. For additional information on the development and implementation of the ELD standards, please contact the Bureau of Student Achievement through Language Acquisition at sala@fldoe.org .

Special Notes

Following the completion of the Health Science Core, the student is eligible to take the National Health Care Foundation Skill Standards Assessment with instructor approval and the completion of a portfolio.

This program meets the Department of Health's education requirements for HIV/AIDS, Domestic Violence and Prevention of Medical Errors. Although not a requirement for initial licensure, it is a requirement for renewal, therefore the instructor **may** provide a certificate for renewal purposes to the student verifying these requirements have been met.

If students in this program are seeking a licensure, certificate or registration through the Department of Health, please refer to 456.0635, F.S. for more information on disqualification for a license, certificate, or registration through the Department of Health.

Career and Technical Student Organization (CTSO)

CTSOs are co-curricular career and technical student organizations providing leadership training and reinforcing specific career and technical skills. Career and Technical Student Organizations provide activities for students as an integral part of the instruction offered. Other CTSOs not listed in this curriculum framework or recognized by the Florida Department of Education are permissible provided they support student mastery over the standards and benchmarks of this curriculum framework.

Cooperative Training – OJT

On-the-job training is appropriate but not required for this program. Whenever offered, the rules, guidelines, and requirements specified in the OJT framework apply.

Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities as identified on the secondary student's Individual Educational Plan (IEP) or 504 plan or postsecondary student's accommodations' plan to meet individual needs and ensure equal access. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

In addition to accommodations, some secondary students with disabilities (students with an IEP served in Exceptional Student Education (ESE)) will need modifications to meet their needs. Modifications change the outcomes or what the student is expected to learn, e.g., modifying the curriculum of a secondary career and technical education course. Note: postsecondary curriculum and regulated secondary programs cannot be modified.

Some secondary students with disabilities (ESE) may need additional time (i.e., longer than the regular school year), to master the student performance standards associated with a regular course or a modified course. If needed, a student may enroll in the same career and technical course more than once. Documentation should be included in the IEP that clearly indicates that it is anticipated that the student may need an additional year to complete a Career and Technical Education (CTE) course. The student should work on different competencies and new applications of competencies each year toward completion of the CTE course. After achieving the competencies identified for the year, the student earns credit for the course. It is important to ensure that credits earned by students are reported accurately. The district's information system must be designed to accept multiple credits for the same course number for eligible students with disabilities.

Florida Department of Education
Curriculum Framework

Program Title: **Dental Laboratory Assisting**
Program Type: **Career Preparatory**
Career Cluster: **Health Science**

Secondary – Career Preparatory	
Program Number	8417150
CIP Number	0317019902
Grade Level	9-12
Program Length	4 credits
Teacher Certification	Refer to the **Program Structure** section.
CTSO	HOSA
SOC Codes (all applicable)	51-9081 -- Dental Laboratory Technicians 31-9099 -- Healthcare Support Workers, All Other
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml

Purpose

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Health Science career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of Health Science career cluster.

The content includes but is not limited to a design to prepare students for employment as dental laboratory technician apprentices or dental laboratory assistants (51-9081 Dental Laboratory Technicians) or to pursue further education in the dental health field. Simulation laboratory experiences are integrated with the didactic portion of this program. Students perform tasks representative of dental laboratory practice.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Program Structure

This program is a planned sequence of instruction totaling four credits. The two credit Health Science Core (Health Science Anatomy & Physiology 841700 and Health Science Foundations 8417110) is required as a prerequisite for all programs and options. Secondary students completing the two required courses will not have to repeat the core in postsecondary.

To teach the courses listed below, instructors must hold at least one of the teacher certifications indicated for that course.

The following table illustrates the secondary program structure:

Course Number	Course Title	Teacher Certification	Length	SOC Code	Level	Graduation Requirement
8417100 **OR** *2000350* **OR** *2000360*	Health Science Anatomy & Physiology **OR** *Anatomy and Physiology* **OR** *Anatomy and Physiology Honors*	ANY HEALTH OCCUP G (See DOE approved list)	1 credit	31-9099	3	EQ
8417110	Health Science Foundations		1 credit	31-9099	3	CT
8417151	Dental Laboratory Assisting 3	DEN LABTEC 7G	1 credit	51-9081	2	CT
8417152	Dental Laboratory Assisting 4		1 credit	51-9081	2	CT

(Graduation Requirement Codes: CT= Career & Technical Education, EQ= Equally Rigorous Science, EC= Economics, MA= Mathematics, PL= Personal Financial Literacy)

Florida's Career Readiness Skills for CTE Programs

Employability Skills	
01.0	Apply academic skills to workplace scenarios.
01.01	Use reading skills.
01.02	Use writing skills.
01.03	Use mathematical strategies and procedures.
01.04	Use scientific principles and procedures.
02.0	Design a solution to an industry problem.
02.01	Use critical thinking.
02.02	Use creativity.
02.03	Make sound decisions.
02.04	Solve problems.
02.05	Reason.
02.06	Plan and organize.
03.0	Manage resources within an industry project
03.01	Manage time.
03.02	Manage money or resources.
03.03	Manage materials.
03.04	Manage personnel.
04.0	Oversee the subcomponents, operations and output of a technical or organizational system.
04.01	Manage systems.
04.02	Monitor systems.
04.03	Improve systems.
05.0	Use information for decision making.
05.01	Locate information.
05.02	Organize information.
05.03	Use information.

	05.04 Analyze information.
	05.05 Communicate information.
06.0	Apply relevant technology to workplace scenarios to aid productivity.
	06.01 Use technology.
07.0	Interpret and express interpersonal communication.
	07.01 Communicate verbally.
	07.02 Listen actively.
	07.03 Comprehend written material.
	07.04 Convey information in writing.
	07.05 Communicate nonverbally.
	07.06 Interpret nonverbal communication.
08.0	Interact with others to accomplish workplace goals.
	08.01 Collaborate with others in a team.
	08.02 Respond to customer needs.
	08.03 Exercise leadership.
	08.04 Negotiate to resolve conflict.
	08.05 Respect others.
09.0	Manage personal behavior to maximize productivity and professional growth.
	09.01 Demonstrate responsibility and self-discipline.
	09.02 Adapt and show flexibility.
	09.03 Work independently.
	09.04 Demonstrate a willingness to learn.
	09.05 Demonstrate integrity.
	09.06 Demonstrate professionalism.
	09.07 Take initiative.
	09.08 Display positive attitude.
	09.09 Take responsibility for professional growth.

Career Exploration & Planning	
10.0	Explain career opportunities aligned with the regional economy and personal aspirations.
10.01	Describe regional occupations that are high-demand, high-growth, high-wage and/or high-skill.
10.02	Describe careers aligned with his or her interests, skills and values based on career assessment, experiential learning, career informational interviews, research and/or reflection.
11.0	Explain postsecondary pathways aligned with his or her career aspirations.
11.01	Compare and contrast postsecondary pathways, including education, employment, entrepreneurship and enlistment (the “Four Es”).
11.02	Compare and contrast regional postsecondary training provider options, including apprenticeships, technical colleges, state colleges, universities and industry-recognized certification providers.
11.03	Define postsecondary credentialing and stacking options, including industry-recognized certifications, apprenticeship certificates of completion, career certificates, licenses and associate or baccalaureate degrees.
11.04	Compare postsecondary training data for training programs of interest, such as total costs, average student loan debt, and median earnings and job placement rates after program completion.
12.0	Develop a personalized career and academic plan.
12.01	Prioritize an occupation, credential and postsecondary training provider for plan formation.
12.02	Self-assess progress toward meeting graduation requirements and skill-development goals.
12.03	Develop and complete a chronological checklist of steps and deadlines prior to postsecondary training or national service application that includes any required documentation to gather, writing prompts and examinations.
12.04	Identify a variety of financial aid opportunities, including scholarships, grants, savings, work, work-study programs, private loans and federal loans.
12.05	Develop a postsecondary training budget that is inclusive of living and school expenses.
Job Attainment	
13.0	Find, assess and apply to job opportunities.
13.01	Identify online job posts relevant to his or her career aspirations.
13.02	Compare and contrast the job posts’ required qualifications, job duties, compensation, benefits and employers.
13.03	Define what information, documentation and writing prompts are required for the positions.
14.0	Communicate personal competence, character and fit for a job opportunity.
14.01	Develop a resume.
14.02	Write a cover letter.
14.03	Curate a professional portfolio that includes work products.
14.04	Prepare for and experience a mock job interview.

15.0	Cultivate and leverage relationships to professionally advance.
	15.01 Request a signed reference letter, letter of recommendation and/or an online skill/professionalism endorsement.
	15.02 Develop a plan to cultivate a professional digital footprint.
	15.03 Develop a networking plan for a specific industry of interest.

Standards

After successfully completing this program, the student will be able to perform the following:

Health Science Core

01.0 Analyze and interpret an overview of the human body, including organization and chemical process.
02.0 Apply correct medical terminology relating to body structure and function within a real-world application.
03.0 Evaluate cells and tissues microscopically and macroscopically and relate their specialized functions.
04.0 Analyze the integumentary system in relation to health and disease.
05.0 Analyze the skeletal system in relation to health and disease.
06.0 Analyze the muscular system in relation to health and disease.
07.0 Analyze the nervous system in relation to health and disease.
08.0 Analyze the endocrine system in relation to health and disease.
09.0 Analyze the cardiovascular/circulatory system in relation to health and disease.
10.0 Analyze the lymphatic and immune systems in relation to health and disease.
11.0 Analyze the respiratory system in relation to health and disease.
12.0 Analyze the digestive system in relation to health and disease.
13.0 Analyze the urinary system in relation to health and disease.
14.0 Analyze the both the male and female reproductive systems in relation to health and disease.
15.0 Identify and explain factors relating to genetics and disease.
16.0 Evaluate and apply the principles of disease transmission and control to real-world scenarios.
17.0 Demonstrate knowledge of the healthcare delivery system and health occupations.
18.0 Demonstrate the ability to communicate and use interpersonal skills effectively.
19.0 Demonstrate legal and ethical responsibilities.
20.0 Demonstrate an understanding of and apply wellness and disease concepts.
21.0 Recognize and practice safety and security procedures.
22.0 Recognize and respond to emergency situations.
23.0 Recognize and practice infection control procedures.
24.0 Demonstrate an understanding of information technology applications in healthcare.
25.0 Demonstrate employability skills.
26.0 Demonstrate knowledge of blood borne diseases, including HIV/AIDS.
27.0 Apply basic math and science skills.

Dental Laboratory Assisting 3 & 4

28.0 Demonstrate communication and computational skills used in a dental laboratory.
29.0 Identify anatomic structure and function of body systems in relation to dental laboratory science.
30.0 Demonstrate computer literacy for dental labs.
31.0 Practice selected dental laboratory techniques.
32.0 Practice accepted principles of safety in the laboratory setting.

Florida Department of Education
Student Performance Standards

Health Science Core

The first two courses in this program are referred to as the Health Science Core and consist of the courses Health Science Anatomy & Physiology (8417100) and Health Science Foundations (8417110). **To ensure consistency whenever these courses are offered, the standards and benchmarks for the health science core have been placed in a separate document. To access this document, visit this link:** https://www.fldoe.org/file/20894/health-sci-core-secondary-2627.rtf

The two credit core is required as a prerequisite for all secondary programs except for Practical Nursing and Pharmacy Technician. Secondary students completing the two required courses will not have to repeat the core in postsecondary. When the recommended sequence is followed, the structure allows students to complete at specified courses for employment or remain for advanced training or cross-training.

Course Title: **Health Science Anatomy & Physiology**
Course Number: **8417100**
Course Credit: **1**

Course Description:

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as, experimental quality, and safety procedures will be an integral part of this course. Students will interact with materials and primary sources of data or with secondary sources of data to observe and understand the natural world. Students will develop an understanding of measurement error, and develop the skills to aggregate, interpret, and present the data and resulting conclusions. Equipment and supplies will be provided to enhance these hands-on experiences for students. A minimum of 20% of classroom time will be dedicated to laboratory experiences.

This course is part of the secondary Health Core consisting of an overview of the human body, both structurally and functionally with emphasis on the pathophysiology and transmission of disease. Medical terminology is an integral part of the course.

The course Anatomy and Physiology (2000350) or Anatomy and Physiology Honors (2000360) may be substituted for the course Health Science Anatomy & Physiology (8417100).

The course Health Science Anatomy & Physiology (8417100) is designated as an equally rigorous (EQ) science credit.

Course Title: **Health Science Foundations**
Course Number: **8417110**
Course Credit: **1**

Course Description:
This course is part of the Secondary Health Core designed to provide the student with an in-depth knowledge of the health care system and associated occupations. Emphasis is placed on communication and interpersonal skills, use of technology, ethics and the development of critical thinking and problem-solving skills. Students may shadow professionals throughout the course.

Florida Department of Education
Student Performance Standards

Course Title: **Dental Laboratory Assisting 3**
Course Number: **8417151**
Course Credit: **1**

Course Description:

This course provides an introduction to dental laboratory techniques and procedures while preparing the student for entry-level employment as a dental laboratory assistant in a dental laboratory.

CTE Standards and Benchmarks	
28.0	Demonstrate communication and computational skills used in a dental laboratory. The student will be able to:
	28.01 Use appropriate dental terminology and abbreviations.
	28.02 Demonstrate the ability to interpret dental laboratory prescriptions.
	28.03 Demonstrate communication skills specific to the dental laboratory setting.
29.0	Identify anatomic structure and function of body systems in relation to dental laboratory science. The student will be able to:
	29.01 Describe the structure and function of head and neck anatomy.
	29.02 Apply understanding of head and neck anatomy in relation to patient use of dental appliances.
30.0	Demonstrate computer literacy for dental lab. The student will be able to:
	30.01 Describe the uses of computers in the health occupation being studied.
	30.02 Demonstrate computational, keyboarding and retrieval skills relevant to job requirements of the dental laboratory industry.
	30.03 Demonstrate computer skills in each clinical rotation.
	30.04 Describe the use of CAD/CAM technology in the dental laboratory.
31.0	Practice selected dental laboratory techniques. The student will be able to:
	31.01 Fabricate a variety of dental models from impressions using appropriate gypsum products and techniques,
	31.02 Fabricate selected provisional dental restorations.

CTE Standards and Benchmarks	
	31.03 Fabricate selected provisional dental prostheses.
	31.04 Fabricate selected dental appliances such as athletic guards, night guards, and bleaching trays.
	31.05 Fabricate custom impression trays and bite rims.
32.0	Practice accepted principles of safety in the dental laboratory setting. The student will be able to:
	32.01 Demonstrate safe use, care and maintenance of equipment and materials.
	32.02 Properly identify and label models, prostheses, etc.
	32.03 Recognize atypical behavior.
	32.04 Follow emergency procedures for a dental laboratory.
	32.05 Demonstrate knowledge of sterile technique and disease prevention in the dental lab.
	32.06 Implement appropriate joint commission patient safety goals.

Florida Department of Education
Student Performance Standards

Course Title: **Dental Laboratory Assisting 4**
Course Number: **8417152**
Course Credit: **1**

Course Description:

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as, experimental quality, and safety procedures will be an integral part of this course. Students will interact with materials and primary sources of data or with secondary sources of data to observe and understand the natural world. Students will develop an understanding of measurement error, and develop the skills to aggregate, interpret, and present the data and resulting conclusions. Equipment and supplies will be provided to enhance these hands-on experiences for students. A minimum of 20% of classroom time will be dedicated to laboratory experiences.

This course may be taken concurrently with Dental Laboratory Assisting 3. This course is a continuation of Dental Laboratory Assisting 3 and will allow the student to practice all aspects of Dental Laboratory Assisting.

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as, experimental, quality, and safety procedures are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate and troubleshoot equipment/tools used to make observations. Students understand measurement error; and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

This program requires a clinical component of approximately 50% the length of the courses following the health science core. A portion of the clinical experience can be achieved through simulation when appropriate.

Clinical courses require contact hours in the clinical setting in order to complete the health science program. Hospitals, nursing homes, and other clinical facilities with clinical affiliation agreements limit the number of students that can rotate and/or be on site at one time. Most facilities, including hospitals and nursing homes, limit the number of students to 15. Due to these industry limitations, it is recommended that the student ratio be 15:1 (student/teacher) based on the clinical facilities that students attend to for clinical training.

Florida Standards for English Language Development (ELD)

English language learners communicate for social and instructional purposes within the school setting. ELD.K12.ELL.SI.1

English Language Development (ELD) Standards Special Notes:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. For additional information on the development and implementation of the ELD standards, please contact the Bureau of Student Achievement through Language Acquisition at sala@fldoe.org.

Special Notes

Following the completion of the Health Science Core, the student is eligible to take the National Health Care Foundation Skill Standards Assessment with instructor approval and the completion of a portfolio.

This program meets the Department of Health HIV/AIDS Domestic Violence and Prevention of Medical Errors education requirements. Upon completion of this program, the instructor will provide a certificate to the student verifying that these requirements have been met.

If students in this program are seeking a licensure, certificate or registration through the Department of Health, please refer to 456.0635, F.S. for more information on disqualification for a license, certificate, or registration through the Department of Health.

Career and Technical Student Organization (CTSO)

CTSOs are co-curricular career and technical student organizations providing leadership training and reinforcing specific career and technical skills. Career and Technical Student Organizations provide activities for students as an integral part of the instruction offered. Other CTSOs not listed in this curriculum framework or recognized by the Florida Department of Education are permissible provided they support student mastery over the standards and benchmarks of this curriculum framework.

Cooperative Training – OJT

On-the-job training is appropriate but not required for this program. Whenever offered, the rules, guidelines, and requirements specified in the OJT framework apply.

Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities as identified on the secondary student's Individual Educational Plan (IEP) or 504 plan or postsecondary student's accommodations' plan to meet individual needs and ensure equal access. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

In addition to accommodations, some secondary students with disabilities (students with an IEP served in Exceptional Student Education (ESE)) will need modifications to meet their needs. Modifications change the outcomes or what the student is expected to learn, e.g., modifying the curriculum of a secondary career and technical education course. Note: postsecondary curriculum and regulated secondary programs cannot be modified.

Some secondary students with disabilities (ESE) may need additional time (i.e., longer than the regular school year), to master the student performance standards associated with a regular course or a modified course. If needed, a student may enroll in the same career and technical course more than once. Documentation should be included in the IEP that clearly indicates that it is anticipated that the student may need an additional year to complete a Career and Technical Education (CTE) course. The student should work on different competencies and new applications of competencies each year toward completion of the CTE course. After achieving the competencies identified for the year, the student earns credit for the course. It is important to ensure that credits earned by students are reported accurately. The district's information system must be designed to accept multiple credits for the same course number for eligible students with disabilities.

Florida Department of Education
Curriculum Framework

Program Title: **Emergency Medical Responder**
Program Type: **Career Preparatory**
Career Cluster: **Health Science**

Secondary – Career Preparatory	
Program Number	8417170
CIP Number	0317020502
Grade Level	9-12
Program Length	3 credits
Teacher Certification	Refer to the **Program Structure** section.
CTSO	HOSA
SOC Codes (all applicable)	31-9099 -- Healthcare Support Workers, All Other 53-3011 -- Ambulance Drivers and Attendants, Except Emergency Medical Technicians
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml

Purpose

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Health Science career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of Health Science career cluster.

The content includes but is not limited to planning, management, finance, technical and production skills, underlying principles of technology, labor issues, community issues and health, safety, and environmental issues. Clinical learning experiences are an integral part of this program.

This instructional program prepares individuals to provide initial care to sick or injured persons or as ambulance drivers and attendants SOC 53-3011. An Emergency Medical Responder may use this training for employment. The Emergency Medical Responder is the first to arrive at the scene of an injury but does not have the primary responsibility for treating and transporting the injured person(s). Emergency Medical Responders may include law enforcement, lifeguard, fire services or basic life support non-licensed personnel who act as part of an organized emergency medical services team.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Program Structure

This program is a planned sequence of instruction totaling three credits. The two credit Health Science Core (Health Science Anatomy & Physiology 8417100 and Health Science Foundations 8417110) is required as a prerequisite for all programs. Secondary students completing the two required courses will not have to repeat the core in postsecondary.

To teach the courses listed below, instructors must hold at least one of the teacher certifications indicated for that course.

The following table illustrates the secondary program structure:

Course Number	Course Title	Teacher Certification	Length	SOC Code	Level	Graduation Requirement
8417100 **OR**	Health Science Anatomy & Physiology **OR**	ANY HEALTH OCCUP G (See DOE approved list) BIOLOGY 1	1 credit	31-9099	3	EQ
2000350 **OR** *2000360*	*Anatomy and Physiology* **OR** *Anatomy and Physiology Honors*	SCIENCE @4 HEALTH 6 BIOLOGY 1 HEALTH ED @4				
8417110	Health Science Foundations	ANY HEALTH OCCUP G (See DOE approved list)	1 credit	31-9099	3	CT
8417171	Emergency Medical Responder 3	REG NURSE 7 G PARAMEDIC @7 7G MED PROF 7 G EMT 7G LAW ENF @7 7G CORR OFF 7G PUB SERV 7G FIRE FIGHT @7 7G PRAC NURSE @7 %7%G (Must be a Registered Nurse)	1 credit	53-3011	3	CT

(Graduation Requirement Codes: CT= Career & Technical Education, EQ= Equally Rigorous Science, EC= Economics, MA= Mathematics, PL= Personal Financial Literacy)

National Standards (NS)

The student performance standards for Emergency Medical Responder were adapted and condensed from U. S. Department of Transportation Emergency Medical Services; National EMS Education Standards; Emergency Medical Responder Instructional Guidelines and American Society for Testing and Materials, Committee F-30. Administrators and instructors should refer to these materials for additional details.

Florida's Career Readiness Skills for CTE Programs

Employability Skills	
01.0	Apply academic skills to workplace scenarios.
01.01	Use reading skills.
01.02	Use writing skills.
01.03	Use mathematical strategies and procedures.
01.04	Use scientific principles and procedures.
02.0	Design a solution to an industry problem.
02.01	Use critical thinking.
02.02	Use creativity.
02.03	Make sound decisions.
02.04	Solve problems.
02.05	Reason.
02.06	Plan and organize.
03.0	Manage resources within an industry project
03.01	Manage time.
03.02	Manage money or resources.
03.03	Manage materials.
03.04	Manage personnel.
04.0	Oversee the subcomponents, operations and output of a technical or organizational system.
04.01	Manage systems.
04.02	Monitor systems.
04.03	Improve systems.
05.0	Use information for decision making.
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05.02	Organize information.
05.03	Use information.

	05.04 Analyze information.
	05.05 Communicate information.
06.0	Apply relevant technology to workplace scenarios to aid productivity.
	06.01 Use technology.
07.0	Interpret and express interpersonal communication.
	07.01 Communicate verbally.
	07.02 Listen actively.
	07.03 Comprehend written material.
	07.04 Convey information in writing.
	07.05 Communicate nonverbally.
	07.06 Interpret nonverbal communication.
08.0	Interact with others to accomplish workplace goals.
	08.01 Collaborate with others in a team.
	08.02 Respond to customer needs.
	08.03 Exercise leadership.
	08.04 Negotiate to resolve conflict.
	08.05 Respect others.
09.0	Manage personal behavior to maximize productivity and professional growth.
	09.01 Demonstrate responsibility and self-discipline.
	09.02 Adapt and show flexibility.
	09.03 Work independently.
	09.04 Demonstrate a willingness to learn.
	09.05 Demonstrate integrity.
	09.06 Demonstrate professionalism.
	09.07 Take initiative.
	09.08 Display positive attitude.
	09.09 Take responsibility for professional growth.

Career Exploration & Planning	
10.0	Explain career opportunities aligned with the regional economy and personal aspirations.
10.01	Describe regional occupations that are high-demand, high-growth, high-wage and/or high-skill.
10.02	Describe careers aligned with his or her interests, skills and values based on career assessment, experiential learning, career informational interviews, research and/or reflection.
11.0	Explain postsecondary pathways aligned with his or her career aspirations.
11.01	Compare and contrast postsecondary pathways, including education, employment, entrepreneurship and enlistment (the “Four Es”).
11.02	Compare and contrast regional postsecondary training provider options, including apprenticeships, technical colleges, state colleges, universities and industry-recognized certification providers.
11.03	Define postsecondary credentialing and stacking options, including industry-recognized certifications, apprenticeship certificates of completion, career certificates, licenses and associate or baccalaureate degrees.
11.04	Compare postsecondary training data for training programs of interest, such as total costs, average student loan debt, and median earnings and job placement rates after program completion.
12.0	Develop a personalized career and academic plan.
12.01	Prioritize an occupation, credential and postsecondary training provider for plan formation.
12.02	Self-assess progress toward meeting graduation requirements and skill-development goals.
12.03	Develop and complete a chronological checklist of steps and deadlines prior to postsecondary training or national service application that includes any required documentation to gather, writing prompts and examinations.
12.04	Identify a variety of financial aid opportunities, including scholarships, grants, savings, work, work-study programs, private loans and federal loans.
12.05	Develop a postsecondary training budget that is inclusive of living and school expenses.
Job Attainment	
13.0	Find, assess and apply to job opportunities.
13.01	Identify online job posts relevant to his or her career aspirations.
13.02	Compare and contrast the job posts’ required qualifications, job duties, compensation, benefits and employers.
13.03	Define what information, documentation and writing prompts are required for the positions.
14.0	Communicate personal competence, character and fit for a job opportunity.
14.01	Develop a resume.
14.02	Write a cover letter.
14.03	Curate a professional portfolio that includes work products.
14.04	Prepare for and experience a mock job interview.

15.0	Cultivate and leverage relationships to professionally advance.
	15.01 Request a signed reference letter, letter of recommendation and/or an online skill/professionalism endorsement.
	15.02 Develop a plan to cultivate a professional digital footprint.
	15.03 Develop a networking plan for a specific industry of interest.

Standards

After successfully completing this program, the student will be able to perform the following:

Health Science Core

01.0 Analyze and interpret an overview of the human body, including organization and chemical process.
02.0 Apply correct medical terminology relating to body structure and function within a real-world application.
03.0 Evaluate cells and tissues microscopically and macroscopically and relate their specialized functions.
04.0 Analyze the integumentary system in relation to health and disease.
05.0 Analyze the skeletal system in relation to health and disease.
06.0 Analyze the muscular system in relation to health and disease.
07.0 Analyze the nervous system in relation to health and disease.
08.0 Analyze the endocrine system in relation to health and disease.
09.0 Analyze the cardiovascular/circulatory system in relation to health and disease.
10.0 Analyze the lymphatic and immune systems in relation to health and disease.
11.0 Analyze the respiratory system in relation to health and disease.
12.0 Analyze the digestive system in relation to health and disease.
13.0 Analyze the urinary system in relation to health and disease.
14.0 Analyze both the male and female reproductive systems in relation to health and disease.
15.0 Identify and explain factors relating to genetics and disease.
16.0 Evaluate and apply the principles of disease transmission and control to real-world scenarios.
17.0 Demonstrate knowledge of the healthcare delivery system and health occupations.
18.0 Demonstrate the ability to communicate and use interpersonal skills effectively.
19.0 Demonstrate legal and ethical responsibilities.
20.0 Demonstrate an understanding of and apply wellness and disease concepts.
21.0 Recognize and practice safety and security procedures.
22.0 Recognize and respond to emergency situations.
23.0 Recognize and practice infection control procedures.
24.0 Demonstrate an understanding of information technology applications in healthcare.
25.0 Demonstrate employability skills.
26.0 Demonstrate knowledge of blood borne diseases, including HIV/AIDS.
27.0 Apply basic math and science skills.

Emergency Medical Responder 3

28.0 Demonstrate an understanding of the roles and responsibilities of the Emergency Medical Responder.
29.0 Demonstrate an ability to communicate effectively as part of the EMS team.
30.0 Workforce Safety and Wellness
31.0 Demonstrate an understanding of medicolegal aspects.
32.0 Recording patient findings.
33.0 Document, Notate Medical Identification Devices, and record vital signs of a sick or injured person (Recording patient findings).

34.0 Patient Education, Therapeutic Communication, & Mobile Integrated Health
35.0 Anatomy and Physiology
36.0 Medical Terminology.
37.0 Pathophysiology.
38.0 Pathophysiology.
39.0 Public Health Overview: Has an awareness of local public health resources and their role in public health.
40.0 Pharmacology: Uses knowledge of the medications that the EMR may administer in an emergency.
41.0 Demonstrate understanding of airway management, respiration, and artificial ventilation.
42.0 Conduct a scene size-up and primary assessment of problems that are a threat to life if not corrected immediately. to (Include age-related variations in pediatric and geriatric patients):
43.0 Provide secondary assessment.
44.0 Demonstrate Cardiopulmonary Resuscitation at the Basic Life Support (BLS) level.
45.0 Recognize and control shock.
46.0 Recognize and control bleeding.
47.0 Identify musculoskeletal injuries.
48.0 Demonstrate proper spinal motion restriction of a cervical/spinal injury.
49.0 Demonstrate proper extremity immobilization as well as other immobilization for other injuries (Chest, pelvis, ribs).
50.0 Provide emergency transport and movement of a sick and/or injured person.
51.0 Identify and provide initial care for a sick and/or injured patient (Include age-related variations in pediatric and geriatric patients).
52.0 Identify and care for patients who are in special situations.
53.0 Provide triage to victims of multiple casualty incidents.
54.0 Recognize life-threatening situations.
55.0 Recognize entrapment situations.
56.0 Ob/Gyn Assist with emergency childbirth.
57.0 EMS Operations

Florida Department of Education
Student Performance Standards

Health Science Core

The first two courses in this program are referred to as the Health Science Core and consist of the courses Health Science Anatomy & Physiology (8417100) and Health Science Foundations (8417110). **To ensure consistency whenever these courses are offered, the standards and benchmarks for the health science core have been placed in a separate document. To access this document, visiting this link:** https://www.fldoe.org/file/20894/health-sci-core-secondary-2627.rtf

The two-credit core is required as a prerequisite for all secondary programs except for Practical Nursing and Pharmacy Technician. Secondary students completing the two required courses will not have to repeat the core in postsecondary. When the recommended sequence is followed, the structure allows students to complete at specified courses for employment or remain for advanced training or cross training.

Course Title: Health Science Anatomy & Physiology
Course Number: 8417100
Course Credit: 1

Course Description:

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as, experimental quality, and safety procedures will be an integral part of this course. Students will interact with materials and primary sources of data or with secondary sources of data to observe and understand the natural world. Students will develop an understanding of measurement error, and develop the skills to aggregate, interpret, and present the data and resulting conclusions. Equipment and supplies will be provided to enhance these hands-on experiences for students. A minimum of 20% of classroom time will be dedicated to laboratory experiences.

This course is part of the secondary Health Core consisting of an overview of the human body, both structurally and functionally with emphasis on the pathophysiology and transmission of disease. Medical terminology is an integral part of the course.

The course Anatomy and Physiology (2000350) or Anatomy and Physiology Honors (2000360) may be substituted for the course Health Science Anatomy & Physiology (8417100).

The course Health Science Anatomy & Physiology (8417100) is designated as an equally rigorous (EQ) science credit.

Course Title: Health Science Foundations
Course Number: 8417110
Course Credit: 1

Course Description:
This course is part of the Secondary Health Core designed to provide the student with an in depth knowledge of the health care system and associated occupations. Emphasis is placed on communication and interpersonal skills, use of technology, ethics and the development of critical thinking and problem-solving skills. Students may shadow professionals throughout the course.

Florida Department of Education
Student Performance Standards

Course Title: Emergency Medical Responder 3
Course Number: 8417171
Course Credit: 1

Course Description:

This course prepares students to be employed as Emergency Medical Responders. Content includes, but not limited to, identifying and practicing within the appropriate scope of practice for an Emergency Medical Responder, demonstrating correct medical procedures for various emergency situations, proficiency in the appropriate instruments used, as well as a foundation in the musculoskeletal system of the body.

CTE Standards and Benchmarks	
28.0	Demonstrate an understanding of the roles and responsibilities of the Emergency Medical Responder. The student will be able to:
28.01	Describe the role of Emergency Medical Responder as a member of the EMS team. (EMS System)
28.02	List and describe the responsibilities of the Emergency Medical Responder for the provision of pre-hospital emergency care within the local EMS system. (Roles)
28.03	Quality improvement vs. quality assurance
28.04	Medical Direction (Role of medical oversight)
28.05	Describe principles of safely operating a ground ambulance. (Culture Safety)
28.06	Implement appropriate Joint Commission patient safety goals. (Patient Safety)
29.0	Demonstrate an ability to communicate effectively as part of the EMS System. The student will be able to:
29.01	Demonstrate the proper procedure for the transfer of patient care to other EMS personnel. Interact within the team's structure (Continuum of care)
29.02	Describe information regarding a patient's condition and treatment that needs to be communicated. (Continuum of care)
29.03	Communicate the Emergency Medical Responder's observations and actions to whomever patient care is transferred. (Continuum of care)
29.04	Describe and apply the principles of communicating with patients in a manner that achieves a positive relationship. (Continuum of care)
29.05	Call for resources (BLS, ALS, Air Transport, Fire, LEO, and Any additional needed resources)

CTE Standards and Benchmarks	
30.0	Workforce Safety and Wellness. The student will be able to:
30.01	Standard safety precautions
30.02	Personal protective equipment
30.03	Lifting and moving patients
30.04	Crew resource management
30.05	Identify stressors which may affect the performance of an Emergency Medical Responder (Stress management)
30.06	Carry out procedures to minimize critical incident stress & Identify signs and symptoms of PTSD and the resources available for treatment. (Responder mental health, resilience and suicide prevention)
30.07	Wellness principles
30.08	Disease transmission
31.0	Demonstrate an understanding of medicolegal aspects. The student will be able to:
31.01	Describe and demonstrate an understanding of the medicolegal aspects of an Emergency Medical Responder's provision of emergency medical care in the jurisdiction having authority, including, but not limited to, duty to act, standard of care, consent/ refusal to care, forcible restraint, abandonment, documentation and any applicable Good Samaritan Laws. (Consent/refusal of care)
31.02	Confidentiality/HIPAA
31.03	Tort and criminal actions & Statutory responsibilities
31.04	Evidence preservation
31.05	Mandatory reporting
31.06	Advanced directives & End-of-life issues
31.07	Practice within medicolegal standards. (Ethical principles/moral obligations)
32.0	Recording patient findings. The student will be able to:
32.01	Impact of research on EMR care
32.02	Data collection
33.0	Document, Notate Medical Identification Devices, and record vital signs of a sick or injured person (Recording patient findings). The student will be able to:

CTE Standards and Benchmarks	
	33.01 Determine and record skin color, temperature and moistness.
	33.02 Demonstrate ability to accurately measure and record vital signs including manual blood pressure.
	33.03 Identify the most commonly used digital medical identification devices.
	33.04 Apply the information contained on or in the medical identification devices to patient assessment and patient care procedures.
34.0	Patient Education, Therapeutic Communication, & Mobile Integrated Health. The student will be able to:
	34.01 Health care literacy
	34.02 Interviewing techniques
	34.03 Active Listening, Be nonbiased, Remain Calm, Reframe Conflict, Verbal defusing strategies, Managing communication challenges
	34.04 Family centered care, Mobile Integrated Health Candidate
35.0	Anatomy and Physiology. The student will be able to:
	35.01 Uses knowledge of the anatomy and function of the upper airway, heart, vessels, blood, lungs, skin, muscles and bones as the foundation of emergency care.
36.0	Medical Terminology. The student will be able to:
	36.01 Uses medical and anatomical terms.
37.0	Pathophysiology. The student will be able to:
	37.01 Uses knowledge of shock and respiratory compromise to respond to life threats.
38.0	Pathophysiology. The student will be able to:
	38.01 Uses knowledge of age-related differences to assess and care for patients.
39.0	Public Health Overview: Has an awareness of local public health resources and their role in public health. The student will be able to:
	39.01 EMS roles in public health and Mobile Integrated Health
	39.02 Infection prevention and control
	39.03 Human trafficking
40.0	Pharmacology: Uses knowledge of the medications that the EMR may administer in an emergency. The student will be able to:

CTE Standards and Benchmarks	
	40.01 Principles of Pharmacology, Medication safety, Kinds of medications used during an emergency
	40.02 Understand the advantages, disadvantages, and techniques of self and peer administration of an intramuscular injection by auto injector.
	40.03 Describe in Acute Medications the names, effects, indications, routes of administration, and dosages for specific medications (i.e., chemical antidote auto injector devices).
	40.04 Demonstrate how to observe and respond to patient's need for narcotic antagonists.
	40.05 Demonstrate accurate dosage calculation.
	40.06 Demonstrate the ***5,6,7?*** rights of administering narcotic antagonists.
	40.07 Demonstrate how to administer narcotic antagonists
	40.08 Document administration of narcotic antagonists and patient's response on medical record.
	40.09 Observe and communicate effects of medications to the patient's assigned EMT/Paramedic.
41.0	Demonstrate understanding of airway management, respiration, and artificial ventilation. The student will be able to:
	41.01 Apply knowledge of anatomy and physiology i.e. Pulmonary Ventilation, Oxygenation, Respiration (External, Internal, and Cellular) to airway management procedures.
	41.02 Understand the pathophysiology of respiratory dysfunction and management of adequate and inadequate respiration.
	41.03 Assessment and management of adequate and inadequate ventilation including the use of available mechanical devices to assure the maintenance of an open airway and assist ventilation according to The International Committee on Resuscitation (ILCOR) standards. Including the effects of ventilations on Cardiac Arrest and Cardiac Output
	41.04 Demonstrate proficiency in supplemental oxygen therapy including portable oxygen cylinder and oxygen delivery devices.
	41.05 Describe and demonstrate airway management utilizing upper airway suctioning.
42.0	Conduct a scene size-up and primary assessment of problems that are a threat to life if not corrected immediately. to (Include age-related variations in pediatric and geriatric patients): The student will be able to:
	42.01 Scene safety/situational awareness, Scene management Impact of the environment on patient care, Addressing hazards, Violence, Need for additional or specialized resources, Standard precautions, Multiple patient situations
	42.02 Determining the chief complaint, Mechanism of injury/ nature of illness, Associated signs and symptoms
	42.03 Determine and record the level of consciousness of the injured person including person, place, time, and events.
	42.04 Assess for an inadequate airway, inadequate respirations, inadequate circulation, and profuse bleeding.

CTE Standards and Benchmarks	
	42.05 Recognize when immediate correction is necessary.
	42.06 Assess patient and determine if the patient has a life-threatening condition.
	42.07 Use spinal precautions as appropriate.
43.0	Provide secondary assessment. The student will be able to:
	43.01 Conduct a methodical head-to-toe physical examination to discover conditions not found during the primary assessment.
	43.02 Interview the sick or injured person to obtain facts relevant to the person's condition.
	43.03 Interview co-workers, witnesses, family members, or other individuals to obtain facts relevant to the person's condition.
	43.04 Reassessment: How and when to reassess patients
44.0	Demonstrate Cardiopulmonary Resuscitation at the Basic Life Support (BLS) level. The student will be able to:
	44.01 Establish and maintain an open airway using both manual and mechanical airway techniques.
	44.02 Restore breathing and circulation by means of cardiopulmonary resuscitation (CPR).
	44.03 Demonstrate proficiency in the use of an automated external defibrillator (AED).
	44.04 Ethical issues in resuscitation, Special arrest and peri-arrest situations
45.0	Recognize and control shock. The student will be able to:
	45.01 Recognize the likelihood that shock may occur or be present based on patient assessment and observation of a mechanism of injury.
	45.02 Provide anti-shock measures as a part of routine patient care.
46.0	Recognize and control bleeding. The student will be able to:
	46.01 Identify items that can be used to control external bleeding and minimize the contamination of open wounds.
	46.02 Apply pressure dressings, tourniquets, and wound packing that will control bleeding/hemorrhage and minimize the contamination of open wounds.
	46.03 Identify the likelihood of internal bleeding through observations of signs, symptoms, and mechanisms of injury.
	46.04 Care for a patient who exhibits the signs and symptoms of internal bleeding.
	46.05 Identify the likelihood of Abdominal and Genitourinary Trauma Blunt versus penetrating mechanisms, Evisceration, and Impaled object

CTE Standards and Benchmarks
46.06 Apply current trauma treatment standards when applying a tourniquet, which may include Trauma| American College of Surgeons standards.
47.0 Identify musculoskeletal injuries. The student will be able to:
47.01 Identify the various types of musculoskeletal injuries.
47.02 Immobilize and otherwise care for suspected fractures, dislocations, sprains, and strains with available supplies and equipment, including commercially available and improvised devices.
47.03 Demonstrate an understanding of the function and need for traction splints.
47.04 Identify and care for patients with Multisystem Trauma
48.0 Demonstrate proper spinal motion restriction of a cervical/spinal injury. The student will be able to:
48.01 Identify need for spinal motion restriction.
48.02 Maintain in-line spinal motion restriction of cervical spine.
48.03 Place proper fitting rigid extrication-type cervical collar.
48.04 Place patient in supine position on appropriate spine board based on patient condition.
48.05 Secure patient to spinal motion restriction device.
48.06 Identify and care for patients with Head, Traumatic Brain Injuries, Facial, and Neck Injuries
49.0 Demonstrate proper extremity immobilization as well as other immobilization for other injuries (Chest, pelvis, ribs). The student will be able to:
49.01 Identify Blunt versus penetrating mechanisms, Open chest wound, Impaled object
49.02 Identify need for extremity immobilization.
49.03 Assesses motor, sensory, and distal circulation in extremities.
49.04 Place proper fitting splint on extremity.
49.05 Reassess motor, sensory, and distal circulation in extremities.
50.0 Provide emergency transport and movement of a sick and/or injured person. The student will be able to:
50.01 Describe situations when a person should be transported to a higher level of care.

CTE Standards and Benchmarks
50.02 Use the most appropriate assistance, drag or carry (alone or with a partner) to move a sick or injured person from a dangerous location to a safe place.
50.03 Maintain safety precautions during relocation of patient.
50.04 Demonstrate an understanding of the purpose and use of transfer methods for patients including stairs, chairs, and stretchers.
51.0 Identify and provide initial care for a sick and/or injured patient (Include age-related variations in pediatric and geriatric patients). The student will be able to:
51.01 Medical Overview: Assessment and management of a medical complaint
51.02 Identify and care for patients with non-traumatic chest pain, utilizing patient assessment.
51.03 Identify and care for patients with abdominal and gastrointestinal disorders, utilizing patient assessment.
51.04 Identify and care for patients experiencing respiratory distress utilizing patient assessment.
51.05 Identify and care for patients with Disorders of the Eyes, Ears, Nose, and Throat utilizing patient assessment.
51.06 Identify and care for patients experiencing a diabetic emergency or in an altered state of consciousness utilizing patient assessment.
51.07 Identify and care for patients experiencing a Genitourinary/Renal emergency utilizing patient assessment.
51.08 Identify and care for patients experiencing an Acute Immunological (Anaphylaxis) emergency utilizing patient assessment.
51.09 Identify and care for a patient who is experiencing a seizure utilizing patient assessment.
51.10 Identify and care for a patient who has ingested, inhaled, absorbed, or been injected with a poisonous substance.
51.11 Identify and care for a patient who may have an infectious disease utilizing patient assessment and how to disinfect and decontaminate equipment after treating a patient.
51.12 Identify and care for a patient who is experiencing a stroke utilizing patient assessment.
51.13 Identify and care for a patient who is experiencing a non-traumatic fracture utilizing patient assessment.
51.14 Identify and care for a patient who is experiencing behaviors that pose a risk to the EMR, patient or others and recognition of suicide risk
51.15 Identify and care for a patient who has a foreign body in the eye utilizing patient assessment.
51.16 Identify and care for a patient with thermal, chemical, or electrical burns, determining the severity including degree, body surface area, type, and location.
51.17 Identify and care for a patient suffering from an environmental emergency including heat cramps, heat exhaustion, heat stroke, and frostbite, utilizing patient assessment.

CTE Standards and Benchmarks	
52.0	Identify and care for patients who are in special situations. The student will be able to:
	52.01 Identify patients who have special needs (including but not limited to abuse, domestic violence, and sex trafficking).
	52.02 Care for the injured/ill physically disabled.
	52.03 Care for the injured/ill developmentally disabled.
53.0	Provide triage to victims of multiple casualty incidents. The student will be able to:
	53.01 Categorize the victims of multiple casualty incidents according to the severity of injury or illness based on patient assessments.
	53.02 Use triage tags or other identification devices available locally to indicate priorities for pre-hospital emergency care and transportation to medical facilities.
	53.03 Work as a member of a team to perform triage at locations of multiple casualty incidents.
	53.04 Work as a member of a team to perform patient assessments at locations of multiple casualty incidents.
	53.05 Work as a member of a team to carry out patient care procedures at the locations of multiple casualty incidents.
	53.06 Demonstrate knowledge of the operating procedures during a terrorist event or during a natural or man-made disaster.
	53.07 Demonstrate a basic understanding of the Incident Command System (ICS) implemented by the Federal Emergency Management Agency (FEMA).
	53.08 Discuss and demonstrate Hazardous Waste Operations and Emergency Response (HAZWOPER) standard, 29 CFR 1910.120 – First Responder Awareness Level (https://www.osha.gov/emergency-preparedness/hazardous-waste-operations/standards).
	53.09 Identify the need for Safe air medical operations, Criteria for utilizing air medical response, Medical risks/needs/advantages
54.0	Recognize life-threatening situations. The student will be able to:
	54.01 Take steps to minimize the chance of injury or death to all involved when confronted with a potentially life-threatening situation based on scene assessment.
55.0	Recognize entrapment situations. The student will be able to:
	55.01 Identify accident-related hazards and undertake hazard control measures consistent with the capabilities of the Emergency Medical Responder and available equipment.
	55.02 Recognize available equipment that is used to safely gain access to persons who are entrapped.
	55.03 Recognize available equipment that is used to safely disentangle persons from mechanisms of entrapment.
	55.04 Identify which agencies to notify for assistance with entrapment situations.

CTE Standards and Benchmarks	
56.0	Ob/Gyn Assist with emergency childbirth. The student will be able to:
56.01	Shock associated with vaginal bleeding
56.02	Evaluate a mother to determine whether delivery is imminent.
56.03	Assist with a normal delivery.
56.04	Assist with and identify newborn stabilization and neonatal resuscitation
56.05	Care for the mother and baby.
56.06	Identify abnormal childbirth situations and care for the mother and baby within the Emergency Medical Responder's capabilities.
57.0	EMS Operations
57.01	Emergency Response Vehicles to include Risks and responsibilities of emergency response and radio communications, Risks and responsibilities of operating emergency vehicles
57.02	Safety principles of rescue operations

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as, experimental, quality, and safety procedures are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate and troubleshoot equipment/tools used to make observations. Students understand measurement error; and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

This program requires a clinical component of approximately 50% the length of the courses following the health science core. A portion of the clinical experience can be achieved through simulation when appropriate.

Clinical courses require contact hours in the clinical setting in order to complete the health science program. Hospitals, nursing homes, and other clinical facilities with clinical affiliation agreements limit the number of students that can rotate and/or be on site at one time. Most facilities, including hospitals and nursing homes, limit the number of students to 15. Due to these industry limitations, it is recommended that the student ratio be 15:1 (student/teacher) based on the clinical facilities that students attend to for clinical training.

Florida Standards for English Language Development (ELD)

English language learners communicate for social and instructional purposes within the school setting. ELD.K12.ELL.SI.1

English Language Development (ELD) Standards Special Notes:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. For additional information on the development and implementation of the ELD standards, please contact the Bureau of Student Achievement through Language Acquisition at sala@fldoe.org .

Special Notes

Following the completion of the Health Science Core, the student is eligible to take the National Health Care Foundation Skill Standards Assessment with instructor approval and the completion of a portfolio.

In order for students to take the NREMT003 Emergency Medical Responder exam the program must be approved by the National Registry for Emergency Medical Technicians. To receive approval from NREMT each program must be "authorized" by the Bureau of Emergency Medical Services (EMS) by completing the instructor qualifications form required by Bureau of EMS.

The Emergency Medical Responder instructor shall issue to each student documentation of successful course completion which shall include date of issuance, student's name, name of sponsoring agency (DOE), name of training agency, and instructor's printed name and signature, plus the

wording "issued pursuant to section 401.435, F.S." The instructor must also maintain on file following course completion, a roster listing the names of students who successfully completed the course, the dates and location of the course, and the name of the instructor.

This program meets the Department of Health's education requirements for HIV/AIDS, Domestic Violence and Prevention of Medical Errors. Although not a requirement for initial licensure, it is a requirement for renewal; therefore, the instructor **may** provide a certificate for renewal purposes to the student verifying these requirements have been met.

If students in this program are seeking a licensure, certificate or registration through the Department of Health, please refer to 456.0635, F.S. for more information on disqualification for a license, certificate, or registration through the Department of Health.

Career and Technical Student Organization (CTSO)

CTSOs are co-curricular career and technical student organizations providing leadership training and reinforcing specific career and technical skills. Career and Technical Student Organizations provide activities for students as an integral part of the instruction offered. Other CTSOs not listed in this curriculum framework or recognized by the Florida Department of Education are permissible provided they support student mastery over the standards and benchmarks of this curriculum framework.

Cooperative Training – OJT

On-the-job training is appropriate but not required for this program. Whenever offered, the rules, guidelines, and requirements specified in the OJT framework apply.

Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities as identified on the secondary student's Individual Educational Plan (IEP) or 504 plan or postsecondary student's accommodations' plan to meet individual needs and ensure equal access. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

In addition to accommodations, some secondary students with disabilities (students with an IEP served in Exceptional Student Education (ESE)) will need modifications to meet their needs. Modifications change the outcomes or what the student is expected to learn, e.g., modifying the curriculum of a secondary career and technical education course. Note: postsecondary curriculum and regulated secondary programs cannot be modified.

Some secondary students with disabilities (ESE) may need additional time (i.e., longer than the regular school year), to master the student performance standards associated with a regular course or a modified course. If needed, a student may enroll in the same career and technical course more than once. Documentation should be included in the IEP that clearly indicates that it is anticipated that the student may need an additional year to complete a Career and Technical Education (CTE) course. The student should work on different competencies and new applications of competencies each year toward completion of the CTE course. After achieving the competencies identified for the year, the student

earns credit for the course. It is important to ensure that credits earned by students are reported accurately. The district's information system must be designed to accept multiple credits for the same course number for eligible students with disabilities.

Florida Department of Education
Curriculum Framework

The standards and benchmarks for this program were updated for the 2026-27 academic year.

Program Title: **Home Health Aide**
Program Type: **Career Preparatory**
Career Cluster: **Health Science**

Secondary – Career Preparatory	
Program Number	8417190
CIP Number	0317040401
Grade Level	9-12
Program Length	2.5 credits
Teacher Certification	Refer to the **Program Structure** section.
CTSO	HOSA
SOC Codes (all applicable)	31-1011 -- Home Health Aides 31-9099 -- Healthcare Support Workers, All Other
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml

Purpose

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Health Science career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of Health Science career cluster.

This program is designed to prepare students for employment as home attendants or home health aides (SOC 31-1011).

The content includes, but is not limited to, instruction in those supportive services that are required to provide and maintain bodily and emotional comfort and to assist the patient toward independent living in a safe environment, as stated in Rules of the Department of Health and Rehabilitative Services, Division of Health, Chapter 10D-68 - Minimum Standards for Home Health Agencies. Clinical experiences, where the student may practice, demonstrate and perform the procedures associated with bedside client care, are an appropriate part of this program.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Program Structure

This program is a planned sequence of instruction totaling 2.5 credits. The two credit Health Science Core (Health Science Anatomy & Physiology 8417100 and Health Science Foundations 8417110) is required as a prerequisite for all programs. Secondary students completing the two required courses will not have to repeat the core in postsecondary.

To teach the courses listed below, instructors must hold at least one of the teacher certifications indicated for that course.

The following table illustrates the secondary program structure:

Course Number	Course Title	Teacher Certification	Length	SOC Code	Level	Graduation Requirement
8417100 **OR** *2000350* **OR** *2000360*	Health Science Anatomy & Physiology **OR** *Anatomy and Physiology* **OR** *Anatomy and Physiology Honors*	ANY HEALTH OCCUP G (See DOE approved list)	1 credit	31-9099	3	EQ
8417110	Health Science Foundations		1 credit	31-9099	3	CT
8417191	Home Health Aide 3	REG NURSE 7 G PRAC NURSE @7%7%G (Must be a Registered Nurse)	.5 credit	31-1011	2	CT

(Graduation Requirement Codes: CT= Career & Technical Education, EQ= Equally Rigorous Science, EC= Economics, MA= Mathematics, PL= Personal Financial Literacy)

Florida's Career Readiness Skills for CTE Programs

Employability Skills	
01.0	Apply academic skills to workplace scenarios.
01.01	Use reading skills.
01.02	Use writing skills.
01.03	Use mathematical strategies and procedures.
01.04	Use scientific principles and procedures.
02.0	Design a solution to an industry problem.
02.01	Use critical thinking.
02.02	Use creativity.
02.03	Make sound decisions.
02.04	Solve problems.
02.05	Reason.
02.06	Plan and organize.
03.0	Manage resources within an industry project
03.01	Manage time.
03.02	Manage money or resources.
03.03	Manage materials.
03.04	Manage personnel.
04.0	Oversee the subcomponents, operations and output of a technical or organizational system.
04.01	Manage systems.
04.02	Monitor systems.
04.03	Improve systems.
05.0	Use information for decision making.
05.01	Locate information.
05.02	Organize information.
05.03	Use information.

	05.04 Analyze information.
	05.05 Communicate information.
06.0	Apply relevant technology to workplace scenarios to aid productivity.
	06.01 Use technology.
07.0	Interpret and express interpersonal communication.
	07.01 Communicate verbally.
	07.02 Listen actively.
	07.03 Comprehend written material.
	07.04 Convey information in writing.
	07.05 Communicate nonverbally.
	07.06 Interpret nonverbal communication.
08.0	Interact with others to accomplish workplace goals.
	08.01 Collaborate with others in a team.
	08.02 Respond to customer needs.
	08.03 Exercise leadership.
	08.04 Negotiate to resolve conflict.
	08.05 Respect others.
09.0	Manage personal behavior to maximize productivity and professional growth.
	09.01 Demonstrate responsibility and self-discipline.
	09.02 Adapt and show flexibility.
	09.03 Work independently.
	09.04 Demonstrate a willingness to learn.
	09.05 Demonstrate integrity.
	09.06 Demonstrate professionalism.
	09.07 Take initiative.
	09.08 Display positive attitude.
	09.09 Take responsibility for professional growth.

Career Exploration & Planning	
10.0	Explain career opportunities aligned with the regional economy and personal aspirations.
10.01	Describe regional occupations that are high-demand, high-growth, high-wage and/or high-skill.
10.02	Describe careers aligned with his or her interests, skills and values based on career assessment, experiential learning, career informational interviews, research and/or reflection.
11.0	Explain postsecondary pathways aligned with his or her career aspirations.
11.01	Compare and contrast postsecondary pathways, including education, employment, entrepreneurship and enlistment (the “Four Es”).
11.02	Compare and contrast regional postsecondary training provider options, including apprenticeships, technical colleges, state colleges, universities and industry-recognized certification providers.
11.03	Define postsecondary credentialing and stacking options, including industry-recognized certifications, apprenticeship certificates of completion, career certificates, licenses and associate or baccalaureate degrees.
11.04	Compare postsecondary training data for training programs of interest, such as total costs, average student loan debt, and median earnings and job placement rates after program completion.
12.0	Develop a personalized career and academic plan.
12.01	Prioritize an occupation, credential and postsecondary training provider for plan formation.
12.02	Self-assess progress toward meeting graduation requirements and skill-development goals.
12.03	Develop and complete a chronological checklist of steps and deadlines prior to postsecondary training or national service application that includes any required documentation to gather, writing prompts and examinations.
12.04	Identify a variety of financial aid opportunities, including scholarships, grants, savings, work, work-study programs, private loans and federal loans.
12.05	Develop a postsecondary training budget that is inclusive of living and school expenses.
Job Attainment	
13.0	Find, assess and apply to job opportunities.
13.01	Identify online job posts relevant to his or her career aspirations.
13.02	Compare and contrast the job posts’ required qualifications, job duties, compensation, benefits and employers.
13.03	Define what information, documentation and writing prompts are required for the positions.
14.0	Communicate personal competence, character and fit for a job opportunity.
14.01	Develop a resume.
14.02	Write a cover letter.
14.03	Curate a professional portfolio that includes work products.
14.04	Prepare for and experience a mock job interview.

15.0	Cultivate and leverage relationships to professionally advance.
	15.01 Request a signed reference letter, letter of recommendation and/or an online skill/professionalism endorsement.
	15.02 Develop a plan to cultivate a professional digital footprint.
	15.03 Develop a networking plan for a specific industry of interest.

Standards

After successfully completing this program, the student will be able to perform the following:

Health Science Core

01.0 Analyze and interpret an overview of the human body, including organization and chemical process.
02.0 Apply correct medical terminology relating to body structure and function within a real-world application.
03.0 Evaluate cells and tissues microscopically and macroscopically and relate their specialized functions.
04.0 Analyze the integumentary system in relation to health and disease.
05.0 Analyze the skeletal system in relation to health and disease.
06.0 Analyze the muscular system in relation to health and disease.
07.0 Analyze the nervous system in relation to health and disease.
08.0 Analyze the endocrine system in relation to health and disease.
09.0 Analyze the cardiovascular/circulatory system in relation to health and disease.
10.0 Analyze the lymphatic and immune systems in relation to health and disease.
11.0 Analyze the respiratory system in relation to health and disease.
12.0 Analyze the digestive system in relation to health and disease.
13.0 Analyze the urinary system in relation to health and disease.
14.0 Analyze both the male and female reproductive systems in relation to health and disease.
15.0 Identify and explain factors relating to genetics and disease.
16.0 Evaluate and apply the principles of disease transmission and control to real-world scenarios.
17.0 Demonstrate knowledge of the healthcare delivery system and health occupations.
18.0 Demonstrate the ability to communicate and use interpersonal skills effectively.
19.0 Demonstrate legal and ethical responsibilities.
20.0 Demonstrate an understanding of and apply wellness and disease concepts.
21.0 Recognize and practice safety and security procedures.
22.0 Recognize and respond to emergency situations.
23.0 Recognize and practice infection control procedures.
24.0 Demonstrate an understanding of information technology applications in healthcare.
25.0 Demonstrate employability skills.
26.0 Demonstrate knowledge of blood borne diseases, including HIV/AIDS.
27.0 Apply basic math and science skills.

Home Health Aide 3

28.0 Use verbal and written communications specific to the Home Health Aide.
29.0 Demonstrate legal and ethical responsibilities specific to the Home Health Aide.
30.0 Perform physical comfort and safety functions specific to the Home Health Aide.
31.0 Provide personal patient care.
32.0 Perform patient care procedures.
33.0 Apply principles of nutrition.

34.0 Provide care for geriatric patients.
35.0 Apply the principles of infection control specific to the Home Health Aide.
36.0 Provide bio-psycho-social support.
37.0 Prioritize and perform functions following the patient care plan.
38.0 Assist with rehabilitative activities.
39.0 Perform home health-care services.

Florida Department of Education
Student Performance Standards

Health Science Core

The first two courses in this program are referred to as the Health Science Core and consist of the courses Health Science Anatomy & Physiology (8417100) and Health Science Foundations (8417110). **To ensure consistency whenever these courses are offered, the standards and benchmarks for the health science core have been placed in a separate document. To access this document, visit this link:** https://www.fldoe.org/file/20894/health-sci-core-secondary-2627.rtf

The two credit core is required as a prerequisite for all secondary programs except for Practical Nursing and Pharmacy Technician. Secondary students completing the two required courses will not have to repeat the core in postsecondary. When the recommended sequence is followed, the structure allows students to complete at specified courses for employment or remain for advanced training or cross-training.

Course Title: **Health Science Anatomy & Physiology**
Course Number: **8417100**
Course Credit: **1**

Course Description:

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as, experimental quality, and safety procedures will be an integral part of this course. Students will interact with materials and primary sources of data or with secondary sources of data to observe and understand the natural world. Students will develop an understanding of measurement error, and develop the skills to aggregate, interpret, and present the data and resulting conclusions. Equipment and supplies will be provided to enhance these hands-on experiences for students. A minimum of 20% of classroom time will be dedicated to laboratory experiences.

This course is part of the secondary Health Core consisting of an overview of the human body, both structurally and functionally with emphasis on the pathophysiology and transmission of disease. Medical terminology is an integral part of the course.

The course Anatomy and Physiology (2000350) or Anatomy and Physiology Honors (2000360) may be substituted for the course Health Science Anatomy & Physiology (8417100).

The course Health Science Anatomy & Physiology (8417100) is designated as an equally rigorous (EQ) science credit.

Course Title: **Health Science Foundations**
Course Number: **8417110**
Course Credit: **1**

Course Description:
This course is part of the Secondary Health Core designed to provide the student with an in-depth knowledge of the health care system and associated occupations. Emphasis is placed on communication and interpersonal skills, use of technology, ethics and the development of critical thinking and problem solving skills. Students may shadow professionals throughout the course.

Florida Department of Education
Student Performance Standards

Course Title: **Home Health Aide 3**
Course Number: **8417191**
Course Credit: **.5**

Course Description:

This course prepares students to be employed as Home Health Aides. Content includes but is not limited to patient care and safety, geriatric patient care, nutrition principles, rehabilitation services, as well as supervised management functions.

CTE Standards and Benchmarks	
28.0	Use verbal and written communications specific to the Home Health Aide. The student will be able to:
28.01	Obtain specified data from the patient and family.
28.02	Utilize verbal and written information to assist with the patient's care plan.
29.0	Demonstrate legal and ethical responsibilities specific to the Home Health Aide. The student will be able to:
29.01	Demonstrate legal and ethical behavior within the role and scope of home health aide responsibilities.
29.02	Follow policies and procedures concerning care as directed by the employer affecting the health, safety, and well-being of patients in the home setting.
29.03	Recognize and report signs of abuse, physical, verbal, and substance.
29.04	Follow legal guidelines in documentation.
29.05	Exhibit behavior supporting and promoting residents' rights.
29.06	Recognize and follow the scope of practice and role limitations for a home health aide.
30.0	Perform physical comfort and safety functions specific to Home Health Aide. The student will be able to:
30.01	Maintain a clean and safe home environment for the patient.
30.02	Adjust bed and/or side rails.
30.03	Transfer patient with mechanical lift using proper body mechanics and patient safety measures.
30.04	Demonstrate proper turning and positioning according to the care plan.

CTE Standards and Benchmarks	
	30.05 Implement fall prevention measures as directed, i.e., clutter-free pathways, locked wheelchair, etc.
	30.06 Apply supportive comfort devices as directed (e.g., footboard, over-bed cradle, alternating pressure mattress).
	30.07 Demonstrate and assist the patient in dangling.
	30.08 Assist patient in ambulation, including the use of a crutch, cane, or walker.
	30.09 Demonstrate the proper wheelchair safety technique and assist the patient as needed with use.
	30.10 Assist patient with care and use of prosthetic/orthotic devices.
	30.11 Describe emergency evacuation procedures with adaptations to the home setting.
	30.12 Implement appropriate regulatory and accrediting agency patient safety guidelines.
31.0	Provide personal patient care. The student will be able to:
	31.01 Perform bed bath; observe and report changes in a patient.
	31.02 Perform back rub.
	31.03 Demonstrate procedures for safety in the bathroom including the use of adaptive shower equipment such as shower chairs, long handled bath sponge, grab bars, extended shower hose, rubber mat in tub or shower, and rubber-based rug outside the shower.
	31.04 Assist with shower or tub bath, including use of specialty tubs.
	31.05 Assist patient with sink, tub, shower, shower cap, or bed shampoo.
	31.06 Demonstrate the use of a safety and/or electric razor to shave the patient.
	31.07 Demonstrate how to groom patient, including hair, skin, foot, and nail care.
	31.08 Assist with and/or administer oral hygiene, including denture care.
	31.09 Assist patient with toileting, using various types of restorative and rehabilitative equipment.
	31.10 Assist patient to dress.
	31.11 Assist patient with meals.
32.0	Perform patient care procedures. The student will be able to:
	32.01 Make an unoccupied and occupied bed.

CTE Standards and Benchmarks	
	32.02 Provide passive range-of-motion exercises.
	32.03 Apply anti-embolic hose and sequential compression devices.
	32.04 Understand and demonstrate proper collection of urine, strained, timed urine, and/or routine urine specimen.
	32.05 Observe skin while bathing for allergic reaction to a catheter or any leaking.
	32.06 Monitor fluid intake and output (I&O), including encouraging and restricting fluids.
	32.07 Observe, record, and report the patient's emesis.
	32.08 Assist with ostomy care and alert the nurse of any unusual observations while performing skin care.
	32.09 Collect stool specimen and alert nurse of unusual odors, colors, or characteristics.
	32.10 Care for patients receiving oxygen therapy, making sure the patient receives the correct flow of oxygen.
33.0	Apply principles of nutrition. The student will be able to:
	33.01 Identify nutrients and food groups.
	33.02 Identify and implement regional, cultural, and religious food guidelines/preferences.
	33.03 Describe special diets.
	33.04 List factors that must be considered when purchasing food.
	33.05 Follow the prescribed basic food plan.
	33.06 List factors that must be considered when storing food.
	33.07 Identify methods of maintaining fluid balance, including encouraging and restricting fluids.
	33.08 Identify methods of food preparation.
	33.09 Discuss the preparation and serving of trays in the home.
34.0	Provide care for geriatric patients. The student will be able to:
	34.01 Identify safety principles as related to the elderly.
	34.02 Describe general characteristics, particular needs, and problems of the elderly.

CTE Standards and Benchmarks	
	34.03 Identify attitudes and living habits that promote positive mental and physical health for the elderly.
	34.04 Distinguish between fact and fallacy about the aging process.
	34.05 Identify community resources and services available to the elderly and their caregiver.
	34.06 Apply reality orientation techniques and validation therapy.
	34.07 Provide and involve patients in diversional activities.
	34.08 Identify common alterations in elderly patient behavior or health status and follow up within the home health aide's scope of performance.
	34.09 Provide care for patients with special needs (e.g., impaired hearing, impaired vision, immobility, impaired body functions).
35.0	Apply the principles of infection control specific to the Home Health Aide. The student will be able to:
	35.01 Provide care for patients with infectious diseases in the home.
	35.02 Follow isolation procedures with food tray, personal protective equipment (PPE), supplies/equipment, and other materials in the home.
	35.03 Utilize standard precautions in all home care.
	35.04 Discuss transmission-based precautions.
36.0	Provide bio-psycho-social support. The student will be able to:
	36.01 Discuss family roles and their significance to health.
	36.02 Respond to patient and family emotional needs.
37.0	Prioritize and perform functions following the patient care plan. The student will be able to:
	37.01 Organize patient-care assignments.
	37.02 Complete assignments accurately and in a timely manner per the care plan.
38.0	Assist with rehabilitative activities. The student will be able to:
	38.01 List the purposes of restorative (rehabilitation) programs.
	38.02 Assist patient with specified restorative (rehabilitation) needs.
	38.03 Assist patients/residents to reach the optimum level of independence.

CTE Standards and Benchmarks	
39.0	Perform home health-care services. The student will be able to:
39.01	Establish and follow a collaborative care plan with the patient and family.
39.02	Perform patient-related cleaning tasks and laundry per care plan.
39.03	Identify methods for medication storage.
39.04	Assist patient with taking self-administered prescribed medication in the home, and identify possible side effects and emergency procedures for adverse reactions in accordance with 59A-8.0095, F.A.C.
39.05	Demonstrate how to utilize equipment and supplies in the home.

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as, experimental, quality, and safety procedures are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate and troubleshoot equipment/tools used to make observations. Students understand measurement error; and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

Please refer to 42CFR§484 for the clinical requirements for the Home Health Aide program.

Clinical courses require contact hours in the clinical setting in order to complete the health science program. Hospitals, nursing homes, and other clinical facilities with clinical affiliation agreements limit the number of students that can rotate and/or be on site at one time. Most facilities, including hospitals and nursing homes, limit the number of students to 15. Due to these industry limitations, it is recommended that the student ratio be 15:1 (student/teacher) based on the clinical facilities that students attend to for clinical training.

Florida Standards for English Language Development (ELD)

English language learners communicate for social and instructional purposes within the school setting. ELD.K12.ELL.SI.1

English Language Development (ELD) Standards Special Notes:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. For additional information on the development and implementation of the ELD standards, please contact the Bureau of Student Achievement through Language Acquisition at sala@fldoe.org .

Special Notes

Following the completion of the Health Science Core, the student is eligible to take the National Health Care Foundation Skill Standards Assessment with instructor approval and the completion of a portfolio.

This program meets the Department of Health's education requirements for HIV/AIDS, Domestic Violence and Prevention of Medical Errors. Although not a requirement for initial licensure, it is a requirement for renewal, therefore the instructor **may** provide a certificate for renewal purposes to the student verifying these requirements have been met.

Section 59A-8.0095 Home Health Aide, Administrative Rules, Department of Health and Rehabilitative Services contain much valuable information for program planning. These rules require that if the Home Health Aide receives training through a vocational school where professional standards have been established in accordance with the State Board of Education, a certificate of successful completion shall be on file with the employer.

Students who have completed this program and the secondary program Nursing Assistant have met competencies for and may be known as Patient Care Assistants. This program may be taken simultaneously with Nursing Assistant.

Career and Technical Student Organization (CTSO)

CTSOs are co-curricular career and technical student organizations providing leadership training and reinforcing specific career and technical skills. Career and Technical Student Organizations provide activities for students as an integral part of the instruction offered. Other CTSOs not listed in this curriculum framework or recognized by the Florida Department of Education are permissible provided they support student mastery over the standards and benchmarks of this curriculum framework.

Cooperative Training – OJT

On-the-job training is appropriate but not required for this program. Whenever offered, the rules, guidelines, and requirements specified in the OJT framework apply.

Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities as identified on the secondary student's Individual Educational Plan (IEP) or 504 plan or postsecondary student's accommodations' plan to meet individual needs and ensure equal access. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

In addition to accommodations, some secondary students with disabilities (students with an IEP served in Exceptional Student Education (ESE)) will need modifications to meet their needs. Modifications change the outcomes or what the student is expected to learn, e.g., modifying the curriculum of a secondary career and technical education course. Note: postsecondary curriculum and regulated secondary programs cannot be modified.

Some secondary students with disabilities (ESE) may need additional time (i.e., longer than the regular school year), to master the student performance standards associated with a regular course or a modified course. If needed, a student may enroll in the same career and technical course more than once. Documentation should be included in the IEP that clearly indicates that it is anticipated that the student may need an additional year to complete a Career and Technical Education (CTE) course. The student should work on different competencies and new applications of competencies each year toward completion of the CTE course. After achieving the competencies identified for the year, the student earns credit for the course. It is important to ensure that credits earned by students are reported accurately. The district's information system must be designed to accept multiple credits for the same course number for eligible students with disabilities.

Florida Department of Education
Curriculum Framework

Program Title: **Medical Laboratory Assisting**
Program Type: **Career Preparatory**
Career Cluster: **Health Science**

Secondary – Career Preparatory	
Program Number	8417200
CIP Number	0317030402
Grade Level	9-12
Program Length	4 credits
Teacher Certification	Refer to the **Program Structure** section.
CTSO	HOSA
SOC Codes (all applicable)	29-2012 -- Medical and Clinical Laboratory Technicians 31-9099 -- Healthcare Support Workers, All Other
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml

Purpose

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Health Science career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of Health Science career cluster.

The content includes but is not limited to planning, management, finance, technical and production skills, underlying principles of technology, labor issues, community issues and health, safety, and environmental issues. Clinical learning experiences are an integral part of this program.

The program is designed to prepare students for employment as medical/clinical lab technicians, (or medical lab assistants 29-2099 - Health Technologists and Technicians, All Other)

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Program Structure

This program is a planned sequence of instruction totaling four credits. The two credit Health Science Core (Health Science Anatomy & Physiology 8417100 and Health Science Foundations 8417110) is required as a prerequisite for all programs. Secondary students completing the two required courses will not have to repeat the core in postsecondary.

To teach the courses listed below, instructors must hold at least one of the teacher certifications indicated for that course.

The following table illustrates the secondary program structure:

Course Number	Course Title	Teacher Certification	Length	SOC Code	Level	Graduation Requirement
8417100 **OR**	Health Science Anatomy & Physiology **OR**	ANY HEALTH OCCUP G (See DOE approved list) BIOLOGY 1	1 credit	31-9099	3	EQ
2000350 **OR** *2000360*	*Anatomy and Physiology* **OR** *Anatomy and Physiology Honors*	SCIENCE @4 HEALTH 6 BIOLOGY 1 HEALTH ED @4				
8417110	Health Science Foundations	ANY HEALTH OCCUP G (See DOE approved list)	1 credit	31-9099	3	CT
8417201	Medical Laboratory Assisting 3	LAB TECH @7 7G	1 credit	29-2012	3	CT
8417202	Medical Laboratory Assisting 4		1 credit	29-2012	3	CT

(Graduation Requirement Codes: CT= Career & Technical Education, EQ= Equally Rigorous Science, EC= Economics, MA= Mathematics, PL= Personal Financial Literacy)

Florida's Career Readiness Skills for CTE Programs

Employability Skills	
01.0	Apply academic skills to workplace scenarios.
01.01	Use reading skills.
01.02	Use writing skills.
01.03	Use mathematical strategies and procedures.
01.04	Use scientific principles and procedures.
02.0	Design a solution to an industry problem.
02.01	Use critical thinking.
02.02	Use creativity.
02.03	Make sound decisions.
02.04	Solve problems.
02.05	Reason.
02.06	Plan and organize.
03.0	Manage resources within an industry project
03.01	Manage time.
03.02	Manage money or resources.
03.03	Manage materials.
03.04	Manage personnel.
04.0	Oversee the subcomponents, operations and output of a technical or organizational system.
04.01	Manage systems.
04.02	Monitor systems.
04.03	Improve systems.
05.0	Use information for decision making.
05.01	Locate information.
05.02	Organize information.
05.03	Use information.

	05.04 Analyze information.
	05.05 Communicate information.
06.0	Apply relevant technology to workplace scenarios to aid productivity.
	06.01 Use technology.
07.0	Interpret and express interpersonal communication.
	07.01 Communicate verbally.
	07.02 Listen actively.
	07.03 Comprehend written material.
	07.04 Convey information in writing.
	07.05 Communicate nonverbally.
	07.06 Interpret nonverbal communication.
08.0	Interact with others to accomplish workplace goals.
	08.01 Collaborate with others in a team.
	08.02 Respond to customer needs.
	08.03 Exercise leadership.
	08.04 Negotiate to resolve conflict.
	08.05 Respect others.
09.0	Manage personal behavior to maximize productivity and professional growth.
	09.01 Demonstrate responsibility and self-discipline.
	09.02 Adapt and show flexibility.
	09.03 Work independently.
	09.04 Demonstrate a willingness to learn.
	09.05 Demonstrate integrity.
	09.06 Demonstrate professionalism.
	09.07 Take initiative.
	09.08 Display positive attitude.
	09.09 Take responsibility for professional growth.

Career Exploration & Planning	
10.0	Explain career opportunities aligned with the regional economy and personal aspirations.
10.01	Describe regional occupations that are high-demand, high-growth, high-wage and/or high-skill.
10.02	Describe careers aligned with his or her interests, skills and values based on career assessment, experiential learning, career informational interviews, research and/or reflection.
11.0	Explain postsecondary pathways aligned with his or her career aspirations.
11.01	Compare and contrast postsecondary pathways, including education, employment, entrepreneurship and enlistment (the “Four Es”).
11.02	Compare and contrast regional postsecondary training provider options, including apprenticeships, technical colleges, state colleges, universities and industry-recognized certification providers.
11.03	Define postsecondary credentialing and stacking options, including industry-recognized certifications, apprenticeship certificates of completion, career certificates, licenses and associate or baccalaureate degrees.
11.04	Compare postsecondary training data for training programs of interest, such as total costs, average student loan debt, and median earnings and job placement rates after program completion.
12.0	Develop a personalized career and academic plan.
12.01	Prioritize an occupation, credential and postsecondary training provider for plan formation.
12.02	Self-assess progress toward meeting graduation requirements and skill-development goals.
12.03	Develop and complete a chronological checklist of steps and deadlines prior to postsecondary training or national service application that includes any required documentation to gather, writing prompts and examinations.
12.04	Identify a variety of financial aid opportunities, including scholarships, grants, savings, work, work-study programs, private loans and federal loans.
12.05	Develop a postsecondary training budget that is inclusive of living and school expenses.
Job Attainment	
13.0	Find, assess and apply to job opportunities.
13.01	Identify online job posts relevant to his or her career aspirations.
13.02	Compare and contrast the job posts’ required qualifications, job duties, compensation, benefits and employers.
13.03	Define what information, documentation and writing prompts are required for the positions.
14.0	Communicate personal competence, character and fit for a job opportunity.
14.01	Develop a resume.
14.02	Write a cover letter.
14.03	Curate a professional portfolio that includes work products.
14.04	Prepare for and experience a mock job interview.

15.0	Cultivate and leverage relationships to professionally advance.
	15.01 Request a signed reference letter, letter of recommendation and/or an online skill/professionalism endorsement.
	15.02 Develop a plan to cultivate a professional digital footprint.
	15.03 Develop a networking plan for a specific industry of interest.

Standards

After successfully completing this program, the student will be able to perform the following:

Health Science Core

01.0 Analyze and interpret an overview of the human body, including organization and chemical process.
02.0 Apply correct medical terminology relating to body structure and function within a real-world application.
03.0 Evaluate cells and tissues microscopically and macroscopically and relate their specialized functions.
04.0 Analyze the integumentary system in relation to health and disease.
05.0 Analyze the skeletal system in relation to health and disease.
06.0 Analyze the muscular system in relation to health and disease.
07.0 Analyze the nervous system in relation to health and disease.
08.0 Analyze the endocrine system in relation to health and disease.
09.0 Analyze the cardiovascular/circulatory system in relation to health and disease.
10.0 Analyze the lymphatic and immune systems in relation to health and disease.
11.0 Analyze the respiratory system in relation to health and disease.
12.0 Analyze the digestive system in relation to health and disease.
13.0 Analyze the urinary system in relation to health and disease.
14.0 Analyze both the male and female reproductive systems in relation to health and disease.
15.0 Identify and explain factors relating to genetics and disease.
16.0 Evaluate and apply the principles of disease transmission and control to real-world scenarios.
17.0 Demonstrate knowledge of the healthcare delivery system and health occupations.
18.0 Demonstrate the ability to communicate and use interpersonal skills effectively.
19.0 Demonstrate legal and ethical responsibilities.
20.0 Demonstrate an understanding of and apply wellness and disease concepts.
21.0 Recognize and practice safety and security procedures.
22.0 Recognize and respond to emergency situations.
23.0 Recognize and practice infection control procedures.
24.0 Demonstrate an understanding of information technology applications in healthcare.
25.0 Demonstrate employability skills.
26.0 Demonstrate knowledge of blood borne diseases, including HIV/AIDS.
27.0 Apply basic math and science skills.

Medical Laboratory Assisting 3

28.0 Demonstrate accepted professional, communication, and interpersonal skills.
29.0 Discuss phlebotomy in relation to the health care setting.
30.0 Identify the anatomic structure and function of body systems in relation to services performed by phlebotomist.
31.0 Recognize and identify collection reagents supplies, equipment and interfering chemical substances.
32.0 Demonstrate skills and knowledge necessary to perform phlebotomy.
33.0 Practice infection control following standard precautions.

34.0 Practice accepted procedures of transporting, accessioning and processing specimens.
35.0 Practice quality assurance and safety.

Medical Laboratory Assisting 4
36.0 Identify the federal and state laws, which serve to regulate the provision of laboratory services, including CLIA, Florida Statutes, and Florida Administrative Code.
37.0 Demonstrate basic knowledge of microbiology.
38.0 Demonstrate basic knowledge of urinalysis.
39.0 Demonstrate basic knowledge of clinical chemistry.
40.0 Demonstrate basic knowledge of hematology.
41.0 Demonstrate basic knowledge of Immunohematology.
42.0 Demonstrate basic knowledge of and perform clinical laboratory Point of Care (POC) testing (Waived).
43.0 Successfully complete learning experiences in the clinical setting.

Florida Department of Education
Student Performance Standards

Health Science Core:

The first two courses in this program are referred to as the Health Science Core and consist of the courses Health Science Anatomy & Physiology (8417100) and Health Science Foundations (8417110). **To ensure consistency whenever these courses are offered, the standards and benchmarks for the health science core have been placed in a separate document. To access this document, visit this link:** https://www.fldoe.org/file/20894/health-sci-core-secondary-2627.rtf

The two credit core is required as a prerequisite for all secondary programs except for Practical Nursing and Pharmacy Technician. Secondary students completing the two required courses will not have to repeat the core in postsecondary. When the recommended sequence is followed, the structure allows students to complete at specified courses for employment or remain for advanced training or cross-training.

Course Title: **Health Science Anatomy & Physiology**
Course Number: **8417100**
Course Credit: **1**

Course Description:

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as, experimental quality, and safety procedures will be an integral part of this course. Students will interact with materials and primary sources of data or with secondary sources of data to observe and understand the natural world. Students will develop an understanding of measurement error, and develop the skills to aggregate, interpret, and present the data and resulting conclusions. Equipment and supplies will be provided to enhance these hands-on experiences for students. A minimum of 20% of classroom time will be dedicated to laboratory experiences.

This course is part of the secondary Health Core consisting of an overview of the human body, both structurally and functionally with emphasis on the pathophysiology and transmission of disease. Medical terminology is an integral part of the course.

The course Anatomy and Physiology (2000350) or Anatomy and Physiology Honors (2000360) may be substituted for the course Health Science Anatomy & Physiology (8417100) and their standards can be found at www.cpalms.org.

The course Health Science Anatomy & Physiology (8417100) is designated as an equally rigorous (EQ) science credit.

Course Title: **Health Science Foundations**
Course Number: **8417110**
Course Credit: **1**

Course Description:
This course is part of the Secondary Health Core designed to provide the student with an in depth knowledge of the health care system and associated occupations. Emphasis is placed on communication and interpersonal skills, use of technology, ethics and the development of critical thinking and problem solving skills. Students may shadow professionals throughout the course.

Florida Department of Education
Student Performance Standards

Course Title: **Medical Laboratory Assisting 3**
Course Number: **8417201**
Course Credit: **1**

Course Description:

This one credit course is the third course of a four course Medical Lab Assistant program. **Live work is not recommended for this course**. Students completing this course have also met the postsecondary requirements of phlebotomy **except for clinical experiences with live work.**

CTE Standards and Benchmarks	
28.0	Demonstrate accepted professional, communication, and interpersonal skills. The student will be able to:
28.01	Demonstrate the appropriate professional behavior of a phlebotomist.
28.02	Explain to the patient the procedure to be used in specimen collection.
28.03	Explain in detail the importance of identifying patients correctly when drawing blood.
28.04	Describe the scope of practice (job skills and duties) for a phlebotomist.
28.05	List and describe professional organizations that provide accreditation, certification, and licensure to phlebotomists and phlebotomy programs.
28.06	Explain the importance of continuing education in relation to certification to maintain competency and skills.
29.0	Discuss phlebotomy in relation to the health care setting. The student will be able to:
29.01	List, classify and discuss various departments and services within the health care setting in which the phlebotomist must interact with to obtain laboratory specimens from patients.
29.02	Identify the major departments/sections with the clinical laboratory, the major types of procedures run in each department/section, and their specimen requirements.
29.03	Describe roles of the major classifications of clinical laboratory personnel (i.e., pathologist, chief/administrative technologist, CLS, MLS, MLT, MT, phlebotomist, lab assistant, etc.).
30.0	Identify the anatomic structure and function of body systems in relation to services performed by phlebotomist. The student will be able to:
30.01	Describe and define major body systems with emphasis on the circulatory system.
30.02	List and describe the main superficial veins used in performing venipuncture.

CTE Standards and Benchmarks	
	30.03 Locate the most appropriate sites(s) for capillary and venipuncture.
	30.04 Describe the function of the following blood components: erythrocytes, thrombocytes, leukocytes and plasma.
	30.05 Compare and contrast between serum and plasma as it relates to blood collection.
	30.06 Discuss hemostasis as it relates to blood collection.
31.0	Recognize and identify collection reagents supplies, equipment, and interfering chemical substances. The student will be able to:
	31.01 Identify and discuss proper use of appropriate types of equipment needed to collect various clinical laboratory blood specimens by venipuncture.
	31.02 Explain the special precautions and types of equipment needed to collect blood from the pediatric patient.
	31.03 Identify and discuss proper use of supplies used in collecting short-draw specimens or difficult draws.
	31.04 Identify and discuss the proper use of the various types of anticoagulants, preservatives and gels used in blood collection and the vacuum tube color-codes for these additives.
	31.05 Describe the types of specimens that are analyzed in the clinical laboratory and the phlebotomist's role in collecting and/or transporting these specimens to the laboratory.
	31.06 Describe substances potentially encountered during phlebotomy which can interfere in analysis of blood constituents.
	31.07 Define and utilize correct medical terminology and metric measurement needed for specimen collection.
32.0	Demonstrate skills and knowledge necessary to perform phlebotomy. The student will be able to:
	32.01 Follow approved procedure for completing a laboratory requisition form.
	32.02 Recognize a properly completed requisition.
	32.03 Demonstrate knowledge of established protocol for patient and specimen identification.
	32.04 Discuss appropriate methods for facilitating and preparing the patient for capillary and venipuncture collection.
	32.05 List appropriate antiseptic agents useful in preparing sites for capillary and venipuncture.
	32.06 Perform venipuncture by evacuated tube, butterfly and syringe systems, demonstrating appropriate use of supplies, proper handling of equipment and specimens, and appropriate patient care.
	32.07 Describe the correct order of draw.
	32.08 Describe the use of barcoding systems used for specimen collection.

CTE Standards and Benchmarks	
	32.09 Convey an understanding of capillary puncture using appropriate supplies and techniques for both adults and pediatric patients.
	32.10 Describe the most common complications associated with capillary and venipuncture, their causes, prevention, and treatment.
	32.11 Recognize and respond to possible adverse patient reactions such as allergies, convulsions, syncope, light headedness, vomiting, and nerve involvement.
	32.12 Perform appropriate procedures for disposing of used or contaminated capillary and venipuncture supplies.
	32.13 Demonstrate the proper procedure for collecting blood cultures.
	32.14 Discuss the effects of hemolysis and methods of prevention.
	32.15 Demonstrate a working understanding of how age and weight of patients impacts the maximum amount of blood that can be safely drawn.
33.0	Practice infection control following standard precautions. The student will be able to:
	33.01 Define the term hospital acquired infection.
	33.02 Describe and practice procedures for infection prevention including hand washing skills.
	33.03 Discuss transmission based precautions.
	33.04 Identify potential routes of infection and their complications.
34.0	Practice accepted procedures of transporting, accessioning, and processing specimens. The student will be able to:
	34.01 Follow the approved procedure for preparation and processing (e.g., centrifugation, separation, aliquoting, labeling, and storage) of serum, plasma, urine, sputum, stool, and wound culture specimens.
	34.02 Demonstrate knowledge of accessioning procedures.
	34.03 Describe the significance of time constraints for specimen collection, transporting and delivery.
	34.04 Describe routine procedures for transporting and processing specimens including DOT packaging requirements.
35.0	Practice quality assurance and safety. The student will be able to:
	35.01 Distinguish and perform procedures which ensure reliability of test results when collecting blood specimens.
	35.02 Practice appropriate patient safety.
	35.03 Practice safety in accordance with OSHA (state & federal guidelines) for chemical, biological, and PPE established procedures including proper disposal of sharps and biohazardous materials.

CTE Standards and Benchmarks
35.04 Follow documentation procedures for work related accidents.
35.05 Implement appropriate Joint Commission patient safety goals and other accrediting/regulatory agency guidelines.

Florida Department of Education
Student Performance Standards

Course Title: **Medical Laboratory Assisting 4**
Course Number: **8417202**
Course Credit: **1**

Course Description:

This one credit course is the fourth course of a four course Medical Lab Assistant program. Students completing this course have also met the postsecondary requirements of Medical Lab Assisting **except for clinical experiences involving live work**.

CTE Standards and Benchmarks	
36.0	Identify the federal and state laws, which serve to regulate the provision of laboratory services, including CLIA, Florida Statutes, and Florida Administrative Code. The student will be able to:
36.01	Explain the CLIA test complexity model and describe the characteristics required for FDA classification of a test as waived.
36.02	Understand the CLIA 88 classification of laboratory testing into waived, moderate, and highly complex including the personnel qualified to perform each.
36.03	Explain the categories of testing personnel established by both CLIA and Florida regulations and describe the basic educational and/or experiential qualifications for each category.
36.04	Explain the differences in requirements for a physician practice laboratory, a hospital laboratory and an independent clinical laboratory.
36.05	Describe Alternate Site Testing requirements as they apply to hospitals in Florida, and compare and contrast these with the requirements for the Federal CLIA program and their four types of certificates: • Certificates of Waiver • Certificate of Provider Performed Microscopy • Certificate of Compliance • Certificate of Accreditation Apply the concepts of Point-of-Care or Near Patient testing to these requirements.
36.06	Demonstrate an understanding of the concepts of “scope of practice”, “professional judgment”, and “duty/obligation to report”.
37.0	Demonstrate basic knowledge of microbiology. The student will be able to:
37.01	Perform techniques of microbiology related to disinfection techniques.
37.02	Discuss techniques of microbiology related to isolation techniques.
37.03	Perform techniques of microbiology related to sterilization techniques.

CTE Standards and Benchmarks	
	37.04 Perform techniques of microbiology related to slide preparation.
	37.05 Describe the basic operation and principles related to usage of microscopes.
	37.06 Understand the staining and microscopic examination of gram stains.
	37.07 Discuss techniques of microbiology related to primary inoculation media, specimen types, and transfer of cultures.
	37.08 Perform basic techniques of microbiology in respect to routine and emergency specimen collection including time constraints.
	37.09 Discuss classification, composition and preparation of culture media.
38.0	Demonstrate basic knowledge of urinalysis. The student will be able to:
	38.01 Understand urinalysis techniques related to normal and abnormal components of the urine.
	38.02 Perform urinalysis techniques related to collection and preservation of specimens and time constraints.
	38.03 Perform urinalysis techniques related to physical properties of urine
	38.04 Perform urinalysis techniques related to dipstick urine pH and describe clinical significance.
	38.05 Discuss urinalysis techniques related to urine specific gravity techniques.
	38.06 Perform dipstick or tablet (non-automated) urinalysis techniques related to performance of chemical tests.
	38.07 Discuss urinalysis techniques related to microscopic identification of significant elements.
	38.08 Perform urinalysis techniques related to principles and use of centrifuge.
39.0	Demonstrate basic knowledge of clinical chemistry. The student will be able to:
	39.01 Perform techniques of clinical chemistry related to metric measurement.
	39.02 Perform techniques of clinical chemistry related to labware and clinical equipment.
	39.03 Perform techniques of clinical chemistry related to reagent preparation, laboratory equipment and laboratory techniques.
	39.04 Discuss techniques of clinical chemistry related to standardization of procedure and use of standards, blanks and controls.
	39.05 Discuss the importance of quality assurance as it relates to patient results.
	39.06 Discuss techniques of clinical chemistry related to visual colorimetry, calibration and use of the spectrophotometer.

CTE Standards and Benchmarks	
	39.07 Demonstrate an understanding of the relationship between common clinical chemical tests and specific body systems and disorders.
40.0	Demonstrate basic knowledge of hematology. The student will be able to:
	40.01 Discuss techniques of hematology related to counting formed elements of blood.
	40.02 Perform techniques of hematology related to preparation and staining.
	40.03 Discuss techniques of cell differential microscopic examination of blood films.
	40.04 Perform appropriate techniques for making a peripheral blood smear for hematologic evaluation.
	40.05 Perform techniques of hematology related to spun hematocrit tests.
	40.06 Discuss techniques of hematology related to the use of platelet function analyzing instruments in addition to performing bleeding times.
	40.07 Perform techniques of hematology related to hemoglobin tests.
	40.08 Understand the use of and importance of red blood cell indices.
	40.09 Discuss basic techniques of hematology related to normal and abnormal physiology.
41.0	Demonstrate basic knowledge of Immunohematology. The student will be able to:
	41.01 Discuss the functions of the Immunohematology department.
	41.02 Understand the four blood groups in ABO system, the inheritance of the blood group antigens, and their corresponding antibodies.
	41.03 Discuss techniques of forward and reverse grouping.
	41.04 Perform ABO slide and tube grouping and interpret the results.
	41.05 Discuss the importance of the Rh blood groups system, the inheritance of Rh antigen, and their corresponding antibodies.
	41.06 Perform Rh D slide typing and interpret the results.
	41.07 Explain the process of blood donation and the requirements necessary to donate blood.
	41.08 Discuss tests performed on donated blood before it can be transfused.
	41.09 Explain the three blood components that can be obtained from a unit of donated blood and how these components would be beneficial to patients.
	41.10 Describe safety precautions that should be observed while performing ABO and Rh D typing.
	41.11 Discuss quality assessment policies and procedures that must be followed to ensure reliable ABO and Rh typing results.

CTE Standards and Benchmarks	
42.0	Demonstrate basic knowledge of and perform clinical laboratory point of care (POC) testing (Waived). The student will be able to:
42.01	Demonstrate the ability to interpret instructions of point of care testing specific to microbiology, hematology, urinalysis, and clinical chemistry including, but not limited to the following: • Test principle • Storage & stability • Internal vs. external quality control • Specimen collection & preparation • Directions for use • Interpretation of results • Interfering substances
42.02	Explain the purpose of performing lot-to-lot correlations.
42.03	Identify normal limits and associate abnormal results with disease and disorders.
42.04	Perform instrument maintenance.
42.05	Discuss the significance of reporting critical values as it applies to Point of Care testing.
42.06	Demonstrate knowledge of the frequency in which quality control procedures should be performed.
43.0	Successfully complete learning experiences in the clinical setting. The student will be able to:
43.01	Observe and participate as appropriate the skills outlined in outcomes for medical lab assisting.
43.02	Complete clinical rotations.

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as, experimental, quality, and safety procedures are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate and troubleshoot equipment/tools used to make observations. Students understand measurement error; and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

Simulation and clinical laboratory experiences are integrated with the didactic portion of this program. Clinical experience is defined as laboratory activities performed in the clinical setting under the supervision of a medical laboratory technician or technologist.

This program requires a clinical component of approximately 50% the length of the courses following the health science core. A portion of the clinical experience can be achieved through simulation when appropriate.

Clinical courses require contact hours in the clinical setting in order to complete the health science program. Hospitals, nursing homes, and other clinical facilities with clinical affiliation agreements limit the number of students that can rotate and/or be on site at one time. Most facilities, including hospitals and nursing homes, limit the number of students to 15. Due to these industry limitations, it is recommended that the student ratio be 15:1 (student/teacher) based on the clinical facilities that students attend to for clinical training.

Florida Standards for English Language Development (ELD)

English language learners communicate for social and instructional purposes within the school setting. ELD.K12.ELL.SI.1

English Language Development (ELD) Standards Special Notes:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. For additional information on the development and implementation of the ELD standards, please contact the Bureau of Student Achievement through Language Acquisition at sala@fldoe.org .

Special Notes

Following the completion of the Health Science Core, the student is eligible to take the National Health Care Foundation Skill Standards Assessment with instructor approval and the completion of a portfolio.

This program meets the Department of Health HIV/AIDS Domestic Violence and Prevention of Medical Errors education requirements. Upon completion of this program, the instructor will provide a certificate to the student verifying that these requirements have been met.

If students in this program are seeking a licensure, certificate or registration through the Department of Health, please refer to 456.0635, F.S. for more information on disqualification for a license, certificate, or registration through the Department of Health.

Students completing the course Medical Laboratory Assisting 3 have also met the postsecondary requirements of phlebotomy except for clinical experiences involving venipuncture on actual patients.

Students completing the course Medical Laboratory Assisting 4 have also met the postsecondary requirements of Medical Lab Assisting except for some clinical experiences involving live work.

Career and Technical Student Organization (CTSO)

CTSOs are co-curricular career and technical student organizations providing leadership training and reinforcing specific career and technical skills. Career and Technical Student Organizations provide activities for students as an integral part of the instruction offered. Other CTSOs not listed in this curriculum framework or recognized by the Florida Department of Education are permissible provided they support student mastery over the standards and benchmarks of this curriculum framework.

Cooperative Training – OJT

On-the-job training is appropriate but not required for this program. Whenever offered, the rules, guidelines, and requirements specified in the OJT framework apply.

Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities as identified on the secondary student's Individual Educational Plan (IEP) or 504 plan or postsecondary student's accommodations' plan to meet individual needs and ensure equal access. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

In addition to accommodations, some secondary students with disabilities (students with an IEP served in Exceptional Student Education (ESE)) will need modifications to meet their needs. Modifications change the outcomes or what the student is expected to learn, e.g., modifying the curriculum of a secondary career and technical education course. Note: postsecondary curriculum and regulated secondary programs cannot be modified.

Some secondary students with disabilities (ESE) may need additional time (i.e., longer than the regular school year), to master the student performance standards associated with a regular course or a modified course. If needed, a student may enroll in the same career and technical course more than once. Documentation should be included in the IEP that clearly indicates that it is anticipated that the student may need an additional year to complete a Career and Technical Education (CTE) course. The student should work on different competencies and new applications of competencies each year toward completion of the CTE course. After achieving the competencies identified for the year, the student earns credit for the course. It is important to ensure that credits earned by students are reported accurately. The district's information system must be designed to accept multiple credits for the same course number for eligible students with disabilities.

Florida Department of Education
Curriculum Framework

The standards and/or benchmarks for this program were updated for the 2026-27 academic year.

Program Title: **Nursing Assistant (Acute and Long-Term Care)**
Program Type: **Career Preparatory**
Career Cluster: **Health Science**

Secondary – Career Preparatory	
Program Number	8417210
CIP Number	0317060201
Grade Level	9-12
Program Length	3 credits
Teacher Certification	Refer to the **Program Structure** section.
CTSO	HOSA
SOC Codes (all applicable)	31-1014 -- Nursing Assistants 31-9099 -- Healthcare Support Workers, All Other
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml

Purpose

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Health Science career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of Health Science career cluster.

This course is designed to prepare students for employment as nursing assistants SOC Code 31-1014 (Nursing Assistants) in nursing homes, hospitals, or other health care facilities.

The content includes, but is not limited to, interpersonal skills, medical terminology, legal and ethical responsibilities, safe and efficient work, gerontology, nutrition, pet-facilitated therapy, health and safety including Cardio-pulmonary Resuscitation (CPR) – heart saver level, and employability skills.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Program Structure

This program is a planned sequence of instruction totaling three credits. The two credit Health Science Core (Health Science Anatomy & Physiology 8417100 and Health Science Foundations 8417110) is required as a prerequisite for all programs. Secondary students completing the two required courses will not have to repeat the core in postsecondary.

To teach the courses listed below, instructors must hold at least one of the teacher certifications indicated for that course.

The following table illustrates the secondary program structure:

Course Number	Course Title	Teacher Certification	Length	SOC Code	Level	Graduation Requirement
8417100 **OR**	Health Science Anatomy & Physiology **OR**	ANY HEALTH OCCUP G (See DOE approved list) BIOLOGY 1	1 credit	31-9099	3	EQ
2000350 **OR** *2000360*	*Anatomy and Physiology* **OR** *Anatomy and Physiology Honors*	SCIENCE @4 HEALTH 6 BIOLOGY 1 HEALTH ED @4				
8417110	Health Science Foundations	ANY HEALTH OCCUP G (See DOE approved list)	1 credit	31-9099	3	CT
8417211	Nursing Assistant 3	REG NURSE 7 G LPN 7 G* PRAC NURSE @7 %7%G (Must be a Registered Nurse)	1 credit	31-1014	3	CT

(Graduation Requirement Codes: CT= Career & Technical Education, EQ= Equally Rigorous Science, EC= Economics, MA= Mathematics, PL= Personal Financial Literacy)

**** The LPN 7 G district issued certification is a practical nurse. A practical nurse can only be utilized as an instructor of the CNA training program when they are supervised by the program coordinator, which must be a registered nurse. Please refer to 64B9-15.005, F.A.C. for requirements.***

Regulated Programs

This program is regulated by the Florida Board of Nursing.

Successful completion of this program from an approved school prepares the student for certification for employment as a Nursing Assistant, in accordance with Chapter 464.203, Florida Statutes. To be approved, this program must be supervised by a registered nurse and follow the faculty qualifications set forth in 64B9-15.005 (3)(a) F.A.C.

New programs must be approved by the Board of Nursing, Department of Health prior to enrolling students.

Those students who satisfactorily complete an approved course are eligible to apply to take the national nursing assistant examination being utilized in Florida, in accordance with Chapter 464.203, F.S. This program includes both Acute and Long-Term Care.

In accordance with 64B9-15.005(4)(c), F.A.C., students will perform nursing skills in the clinical and simulated laboratory settings under the supervision of a qualified instructor. The clinical instruction ratio for program instructor to student is 1 to 15 for students caring directly for residents or clients.

In accordance with 64B9-15.006(2), F.A.C., The standardized curriculum shall require a minimum of 80 hours of classroom and 40 hours clinical instruction. The clinical instruction shall include at least 20 hours of long-term care clinical instruction in a licensed nursing home.

In accordance with 64B9-15.006(3), F.A.C., Prior to any direct contact with a resident, a training program shall require that a student receive a minimum of 16 hours of classroom instruction in communication and interpersonal skills; infection control; safety/emergency procedures, including the Heimlich maneuver; promoting residents' independence; and respecting residents' rights.

According to Section 400.211, F.S., persons who are enrolled in, or have completed, a state approved nursing assistant training program may be employed by a licensed nursing facility for a period of four months. However, the certification requirements must be met within four months of such initial employment.

Florida's Career Readiness Skills for CTE Programs

Employability Skills	
01.0	Apply academic skills to workplace scenarios.
01.01	Use reading skills.
01.02	Use writing skills.
01.03	Use mathematical strategies and procedures.
01.04	Use scientific principles and procedures.
02.0	Design a solution to an industry problem.
02.01	Use critical thinking.
02.02	Use creativity.
02.03	Make sound decisions.
02.04	Solve problems.
02.05	Reason.
02.06	Plan and organize.
03.0	Manage resources within an industry project
03.01	Manage time.
03.02	Manage money or resources.
03.03	Manage materials.
03.04	Manage personnel.
04.0	Oversee the subcomponents, operations and output of a technical or organizational system.
04.01	Manage systems.
04.02	Monitor systems.
04.03	Improve systems.
05.0	Use information for decision making.
05.01	Locate information.
05.02	Organize information.
05.03	Use information.

	05.04 Analyze information.
	05.05 Communicate information.
06.0	Apply relevant technology to workplace scenarios to aid productivity.
	06.01 Use technology.
07.0	Interpret and express interpersonal communication.
	07.01 Communicate verbally.
	07.02 Listen actively.
	07.03 Comprehend written material.
	07.04 Convey information in writing.
	07.05 Communicate nonverbally.
	07.06 Interpret nonverbal communication.
08.0	Interact with others to accomplish workplace goals.
	08.01 Collaborate with others in a team.
	08.02 Respond to customer needs.
	08.03 Exercise leadership.
	08.04 Negotiate to resolve conflict.
	08.05 Respect others.
09.0	Manage personal behavior to maximize productivity and professional growth.
	09.01 Demonstrate responsibility and self-discipline.
	09.02 Adapt and show flexibility.
	09.03 Work independently.
	09.04 Demonstrate a willingness to learn.
	09.05 Demonstrate integrity.
	09.06 Demonstrate professionalism.
	09.07 Take initiative.
	09.08 Display positive attitude.
	09.09 Take responsibility for professional growth.

Career Exploration & Planning	
10.0	Explain career opportunities aligned with the regional economy and personal aspirations.
10.01	Describe regional occupations that are high-demand, high-growth, high-wage and/or high-skill.
10.02	Describe careers aligned with his or her interests, skills and values based on career assessment, experiential learning, career informational interviews, research and/or reflection.
11.0	Explain postsecondary pathways aligned with his or her career aspirations.
11.01	Compare and contrast postsecondary pathways, including education, employment, entrepreneurship and enlistment (the “Four Es”).
11.02	Compare and contrast regional postsecondary training provider options, including apprenticeships, technical colleges, state colleges, universities and industry-recognized certification providers.
11.03	Define postsecondary credentialing and stacking options, including industry-recognized certifications, apprenticeship certificates of completion, career certificates, licenses and associate or baccalaureate degrees.
11.04	Compare postsecondary training data for training programs of interest, such as total costs, average student loan debt, and median earnings and job placement rates after program completion.
12.0	Develop a personalized career and academic plan.
12.01	Prioritize an occupation, credential and postsecondary training provider for plan formation.
12.02	Self-assess progress toward meeting graduation requirements and skill-development goals.
12.03	Develop and complete a chronological checklist of steps and deadlines prior to postsecondary training or national service application that includes any required documentation to gather, writing prompts and examinations.
12.04	Identify a variety of financial aid opportunities, including scholarships, grants, savings, work, work-study programs, private loans and federal loans.
12.05	Develop a postsecondary training budget that is inclusive of living and school expenses.
Job Attainment	
13.0	Find, assess and apply to job opportunities.
13.01	Identify online job posts relevant to his or her career aspirations.
13.02	Compare and contrast the job posts’ required qualifications, job duties, compensation, benefits and employers.
13.03	Define what information, documentation and writing prompts are required for the positions.
14.0	Communicate personal competence, character and fit for a job opportunity.
14.01	Develop a resume.
14.02	Write a cover letter.
14.03	Curate a professional portfolio that includes work products.
14.04	Prepare for and experience a mock job interview.

15.0	Cultivate and leverage relationships to professionally advance.
	15.01 Request a signed reference letter, letter of recommendation and/or an online skill/professionalism endorsement.
	15.02 Develop a plan to cultivate a professional digital footprint.
	15.03 Develop a networking plan for a specific industry of interest.

Standards

After successfully completing this program, the student will be able to perform the following:

Health Science Core

01.0 Analyze and interpret an overview of the human body, including organization and chemical process.
02.0 Apply correct medical terminology relating to body structure and function within a real-world application.
03.0 Evaluate cells and tissues microscopically and macroscopically and relate their specialized functions.
04.0 Analyze the integumentary system in relation to health and disease.
05.0 Analyze the skeletal system in relation to health and disease.
06.0 Analyze the muscular system in relation to health and disease.
07.0 Analyze the nervous system in relation to health and disease.
08.0 Analyze the endocrine system in relation to health and disease.
09.0 Analyze the cardiovascular/circulatory system in relation to health and disease.
10.0 Analyze the lymphatic and immune systems in relation to health and disease.
11.0 Analyze the respiratory system in relation to health and disease.
12.0 Analyze the digestive system in relation to health and disease.
13.0 Analyze the urinary system in relation to health and disease.
14.0 Analyze both the male and female reproductive systems in relation to health and disease.
15.0 Identify and explain factors relating to genetics and disease.
16.0 Evaluate and apply the principles of disease transmission and control to real-world scenarios.
17.0 Demonstrate knowledge of the healthcare delivery system and health occupations.
18.0 Demonstrate the ability to communicate and use interpersonal skills effectively.
19.0 Demonstrate legal and ethical responsibilities.
20.0 Demonstrate an understanding of and apply wellness and disease concepts.
21.0 Recognize and practice safety and security procedures.
22.0 Recognize and respond to emergency situations.
23.0 Recognize and practice infection control procedures.
24.0 Demonstrate an understanding of information technology applications in healthcare.
25.0 Demonstrate employability skills.
26.0 Demonstrate knowledge of blood borne diseases, including HIV/AIDS.
27.0 Apply basic math and science skills.

Nursing Assistant 3

28.0 Use verbal and written communications specific to nurse assisting.
29.0 Demonstrate legal and ethical responsibilities specific to nurse assisting.
30.0 Perform physical comfort and safety functions specific to nurse assisting.
31.0 Provide personal patient care.
32.0 Perform patient care procedures.
33.0 Apply principles of nutrition.

34.0 Provide care for geriatric patients.
35.0 Apply the principles of infection control specific to nursing assisting.
36.0 Provide biological, psychological, and social support.
37.0 Perform supervised organizational functions, following the patient care plan.
38.0 Assist with restorative (rehabilitative) activities.

Florida Department of Education
Student Performance Standards

Health Science Core

The first two courses in this program are referred to as the Health Science Core and consist of the courses Health Science Anatomy & Physiology (8417100) and Health Science Foundations (8417110). **To ensure consistency whenever these courses are offered, the standards and benchmarks for the health science core have been placed in a separate document. To access this document, visit this link:** https://www.fldoe.org/file/20894/health-sci-core-secondary-2627.rtf

The two credit core is required as a prerequisite for all secondary programs except for Practical Nursing and Pharmacy Technician. Secondary students completing the two required courses will not have to repeat the core in postsecondary. When the recommended sequence is followed, the structure allows students to complete at specified courses for employment or remain for advanced training or cross-training.

Course Title: Health Science Anatomy & Physiology
Course Number: 8417100
Course Credit: 1

Course Description:

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as, experimental quality, and safety procedures will be an integral part of this course. Students will interact with materials and primary sources of data or with secondary sources of data to observe and understand the natural world. Students will develop an understanding of measurement error, and develop the skills to aggregate, interpret, and present the data and resulting conclusions. Equipment and supplies will be provided to enhance these hands-on experiences for students. A minimum of 20% of classroom time will be dedicated to laboratory experiences.

This course is part of the secondary Health Core consisting of an overview of the human body, both structurally and functionally with emphasis on the pathophysiology and transmission of disease. Medical terminology is an integral part of the course.

The course *Anatomy and Physiology (2000350) or Anatomy and Physiology Honors (2000360)* may be substituted for the course Health Science Anatomy & Physiology (8417100) and their standards can be found at www.cpalms.org.

The course Health Science Anatomy & Physiology (8417100) is designated as an equally rigorous (EQ) science credit.

Course Title: Health Science Foundations
Course Number: 8417110
Course Credit: 1

Course Description:
This course is part of the Secondary Health Core designed to provide the student with an in depth knowledge of the health care system and associated occupations. Emphasis is placed on communication and interpersonal skills, use of technology, ethics and the development of critical thinking and problem solving skills. Students may shadow professionals throughout the course.

Florida Department of Education
Student Performance Standards

Course Title: Nursing Assistant 3
Course Number: 8417211
Course Credit: 1

Course Description:

This is a course designed to prepare the student to provide/assist with all aspects of activities of daily living for the adult patient in both hospital and nursing home settings. The course, which is taught by a registered nurse, includes didactic instruction, skills practice in the laboratory and clinical experience. Emphasis is also placed on the development of communication, interpersonal, problem solving and critical thinking skills.

Upon successful completion, the student is eligible to apply to sit for the Florida State Certified Nursing Assistant exam which qualifies as industry certification.

CTE Standards and Benchmarks	
28.0	Use verbal and written communications specific to nurse assisting. The student will be able to:
28.01	Obtain specified data from patient and family.
28.02	Utilize verbal and written information to assist with the patient's plan of care.
28.03	Demonstrate use of the communication system.
29.0	Demonstrate legal and ethical responsibilities specific to nurse assisting. The student will be able to:
29.01	Discuss and demonstrate legal and ethical behavior within the nursing assistant scope of practice including role limitations in Florida.
29.02	Describe the purpose of the chain of communication to resolve conflict.
29.03	Follow policies and procedures affecting the health, safety, and well-being of patients.
29.04	Demonstrate safe standards of patient care including prevention and quality of care
29.05	Exhibit behavior supporting and promoting patients’ and/or residents' rights.
29.06	Recognize potential for and prevention of medical errors.
29.07	Practice the proper procedures to follow regarding medical errors.
29.08	Follow policies and procedures affecting the health, safety, and well-being of patients.

CTE Standards and Benchmarks	
	29.09 Recognize and report signs of substance abuse.
	29.10 Demonstrate the understanding of vulnerable population abuse and reporting procedures per agency.
	29.11 Recognize that a C.N.A. must self-report any crimes they've been involved in within 30 days of the offense in accordance with (456.0727(1)(w), F.S.).
	29.12 Define Omnibus Budget Reconciliation Act (OBRA).
	29.13 Define Minimum Data Set (MDS).
30.0	Perform physical comfort and safety functions specific to nurse assisting. The student will be able to:
	30.01 Implement appropriate regulatory and accrediting agency patient safety guidelines.
	30.02 Maintain safe patient units, equipment, and a comfortable environment.
	30.03 Maintain service areas on the units including supplies and equipment.
	30.04 Observe, report, and record changes in the patient's behavior as needed, including mental awareness.
	30.05 Demonstrate adjustment of bed and side-rails according to facility policy.
	30.06 Demonstrate and assist patient to dangle.
	30.07 Demonstrate lifting, supporting and transferring patients from bed to chair, bed to bed, and bed to stretcher, including the use of the various assistive devices and equipment while utilizing proper body mechanics and patient safety measures
	30.08 Demonstrate the proper use of a gait/transfer belt in both transfer and ambulation.
	30.09 Assist patient in ambulation, including the use of crutch, cane, or walker.
	30.10 Demonstrate the proper wheelchair safety techniques and assist patient as needed with use.
	30.11 Apply supportive devices as directed (e.g., footboard, over-bed cradle, alternating pressure mattress).
	30.12 Assist patient with care and use of prosthetic/orthotic devices.
	30.13 Describe emergency procedures utilized in the clinical area(s) and the role of the nursing assistant in these procedures.
31.0	Provide personal patient care. The student will be able to:
	31.01 Perform bed bath; observe and report changes in a patient including skin and level of consciousness.
	31.02 Assist with shower or tub bath, including the use of specialty tubs or prepackaged disposable-bagged bath.

CTE Standards and Benchmarks	
	31.03 Administer back rub with bath and as needed.
	31.04 Assist patient with hair care utilizing sink, tub, shower, bed or shower cap.
	31.05 Demonstrate the use of a safety and/or electric razor to shave the patient.
	31.06 Demonstrate how to groom patient, including hair, skin, foot, hand and nail care.
	31.07 Assist with and/or administer oral hygiene including denture care.
	31.08 Assist patient to dress.
	31.09 Assist patient with toileting using various types of restorative and rehabilitative equipment.
	31.10 Assist patient with use of bedpan (standard and fracture)
	31.11 Assist with bowel and bladder training.
	31.12 Assist and/ or provide perineal care.
	31.13 Empty, measure and record urinary output and/or drainage.
	31.14 Demonstrate application and use of a leg bag, leg strap and dignity bag.
	31.15 Monitor and assist with the drainage of urostomy bags and colostomy bags.
	31.16 Assist patient with both donning and doffing prosthesis and brace.
	31.17 Assist patient with meals.
	31.18 Describe the relationships of body systems when providing patient care.
	31.19 Recognize abnormal signs and symptoms of common diseases and conditions when providing patient care.
32.0	Perform patient care procedures. The student will be able to:
	32.01 Demonstrate ability to accurately measure, record and report vital signs.
	32.02 Assist with the admission of a patient and/or resident.
	32.03 Assist with the admission, transfer, and discharge of a patient and/or resident.
	32.04 Maintain patient-belongings list.

CTE Standards and Benchmarks	
	32.05 Make unoccupied/occupied bed.
	32.06 Provide passive range-of-motion exercises.
	32.07 Apply anti-embolic hose and sequential compression devices.
	32.08 Understand and demonstrate proper collection of routine, timed urine and clean catch urine specimens.
	32.09 Record fluid intake and output (I&O).
	32.10 Observe, record, and report patient's emesis.
	32.11 Monitor and provide urinary catheter care and drainage systems.
	32.12 Assist with ostomy care including emptying or changing ostomy bags that do not adhere to the skin.
	32.13 Collect stool specimen.
	32.14 Assist with the collection of a sputum specimen.
	32.15 Assist the nurse with care of the patient with complex medical needs.
	32.16 Assist patient to apply binders.
	32.17 Care for patient in skin and skeletal traction.
	32.18 Assist with pre-operative and post-operative patient care.
	32.19 Reinforce dressings under the supervision of the RN/LPN.
	32.20 Obtain and record an apical pulse.
	32.21 Provide cast care and/or pin care.
	32.22 Provide care for eyeglasses, artificial eyes, and contact lens.
33.0	Apply principles of nutrition. The student will be able to:
	33.01 Identify nutrients and food groups.
	33.02 Develop a basic food plan.
	33.03 Describe special diets.

CTE Standards and Benchmarks	
	33.04 Check patient's diet tray for accuracy.
	33.05 Monitor and document Nutritional Intake.
	33.06 Identify and implement regional, cultural and religious food guidelines/preferences.
	33.07 Demonstrate knowledge of the need for thickened liquids and fluid consistency.
	33.08 Identify methods of maintaining fluid balance including encouraging and restricting fluids.
34.0	Provide care for geriatric patients. The student will be able to:
	34.01 Identify and assist with methods and procedures to prevent pressure ulcers.
	34.02 Identify and assist with methods to prevent falls in the elderly.
	34.03 Identify and assist with safety principles as related to the elderly.
	34.04 Describe general characteristics, particular needs, and age related changes of the elderly.
	34.05 Identify attitudes and living habits that promote positive mental and physical health for the elderly.
	34.06 Distinguish between fact and fallacy about the aging process.
	34.07 Apply reality orientation techniques and validation therapy unless it is contraindicated by the patient diagnosis.
	34.08 Recognize and respond appropriately to symptoms of common diseases, including dementia, depression/suicide and Alzheimers.
	34.09 Provide and involve patients in diversional activities.
	34.10 Identify common alterations in elderly patient behavior.
	34.11 Provide care for patients with special needs (e.g., impaired hearing, impaired vision, immobility, impaired body functions, cognitively impaired (dementia)).
	34.12 Demonstrate awareness of common behaviors in drug use and abuse in the elderly.
	34.13 Report concerns to the nurse and appropriate authorities related to drug use and abuse in the elderly patient.
	34.14 Identify the need for community resources and services available to the elderly and their caregiver.
	34.15 Identify components of the grief process.
	34.16 Demonstrate an understanding of end of life care, hospice and palliative care.

CTE Standards and Benchmarks	
35.0	Apply the principles of infection control specific to nursing assisting. The student will be able to:
35.01	Discuss transmission-based precautions.
35.02	Identify the chain of infection.
35.03	Provide care for patients with infectious diseases applying the principles of "Standard Precautions" utilized with all patients as well as special procedures required.
35.04	Apply the proper use of personal protective equipment (PPE) for all types of isolation including donning and removing PPE appropriately.
35.05	Follow isolation procedure with food tray, PPE, and other supplies/equipment.
35.06	Collect specimen from patient in isolation.
36.0	Provide biological, psychological, and social support. The student will be able to:
36.01	Discuss family roles and their significance to health.
36.02	Respond to patient and family emotional needs.
37.0	Perform supervised organizational functions, following the patient care plan. The student will be able to:
37.01	Organize and prioritize patient-care assignments.
37.02	Complete assignments accurately and in a timely manner.
38.0	Assist with restorative (rehabilitative) activities. The student will be able to:
38.01	List the purposes of restorative (rehabilitation) program.
38.02	Assist patient with specified restorative (rehabilitation) needs.
38.03	Assist patients/residents to reach the optimum level of independence.

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as, experimental, quality, and safety procedures are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate and troubleshoot equipment/tools used to make observations. Students understand measurement error; and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

Florida Standards for English Language Development (ELD)

English language learners communicate for social and instructional purposes within the school setting. ELD.K12.ELL.SI.1

English Language Development (ELD) Standards Special Notes:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. For additional information on the development and implementation of the ELD standards, please contact the Bureau of Student Achievement through Language Acquisition at sala@fldoe.orgg

Special Notes

Students completing this program and the course Home Health Aide 3 have met the requirements for, and may be known as, Patient Care Assistants.

Following the completion of Health Science 1 and Health Science 2, the student is eligible to take the National Health Care Foundation Skill Standards Assessment with instructor approval and the completion of a portfolio.

This program meets the Department of Health's education requirements for HIV/AIDS, Domestic Violence and Prevention of Medical Errors. Although not a requirement for initial licensure, it is a requirement for renewal, therefore the instructor **may** provide a certificate for renewal purposes to the student verifying these requirements have been met.

If students in this program are seeking a licensure, certificate or registration through the Department of Health, please refer to 456.0635, F.S. for more information on disqualification for a license, certificate, or registration through the Department of Health.

Career and Technical Student Organization (CTSO)

CTSOs are co-curricular career and technical student organizations providing leadership training and reinforcing specific career and technical skills. Career and Technical Student Organizations provide activities for students as an integral part of the instruction offered. Other CTSOs not listed in this curriculum framework or recognized by the Florida Department of Education are permissible provided they support student mastery over the standards and benchmarks of this curriculum framework.

Cooperative Training – OJT

On-the-job training is appropriate but not required for this program. Whenever offered, the rules, guidelines, and requirements specified in the OJT framework apply.

Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities as identified on the secondary student's Individual Educational Plan (IEP) or 504 plan or postsecondary student's accommodations' plan to meet individual needs and ensure equal access. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

In addition to accommodations, some secondary students with disabilities (students with an IEP served in Exceptional Student Education (ESE)) will need modifications to meet their needs. Modifications change the outcomes or what the student is expected to learn, e.g., modifying the curriculum of a secondary career and technical education course. Note: postsecondary curriculum and regulated secondary programs cannot be modified.

Some secondary students with disabilities (ESE) may need additional time (i.e., longer than the regular school year), to master the student performance standards associated with a regular course or a modified course. If needed, a student may enroll in the same career and technical course more than once. Documentation should be included in the IEP that clearly indicates that it is anticipated that the student may need an additional year to complete a Career and Technical Education (CTE) course. The student should work on different competencies and new applications of competencies each year toward completion of the CTE course. After achieving the competencies identified for the year, the student earns credit for the course. It is important to ensure that credits earned by students are reported accurately. The district's information system must be designed to accept multiple credits for the same course number for eligible students with disabilities.

Florida Department of Education
Curriculum Framework

Program Title: **Vision Care Assisting**
Program Type: **Career Preparatory**
Career Cluster: **Health Science**

Secondary – Career Preparatory	
Program Number	8417230
CIP Number	0317070202
Grade Level	9-12
Program Length	4 credits
Teacher Certification	Refer to the **Program Structure** section.
CTSO	HOSA
SOC Codes (all applicable)	29-2081 -- Opticians, Dispensing 31-9099 -- Healthcare Support Workers, All Other
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml

Purpose

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Health Science career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of Health Science career cluster.

This program is designed to prepare students for employment as vision care assistants (Industry Title) at the aide level to assist opticians: dispensing and measuring, lens grinders, and other trained workers in the field of optics SOC 29-2081 (Opticians, Dispensing).

The content includes but is not limited to planning, management, finance, technical and production skills, underlying principles of technology, labor issues, community issues and health, safety, and environmental issues. Clinical learning experiences are an integral part of this program.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Program Structure

This program is a planned sequence of instruction totaling four credits. The two credit Health Science Core (Health Science Anatomy & Physiology 8417100 and Health Science Foundations 8417110) is required as a prerequisite for all programs and options. Secondary students completing the two required courses will not have to repeat the core in postsecondary.

To teach the courses listed below, instructors must hold at least one of the teacher certifications indicated for that course.

The following table illustrates the secondary program structure:

Course Number	Course Title	Teacher Certification	Length	SOC Code	Level	Graduation Requirement
8417100 **OR** *2000350* **OR** *2000360*	Health Science Anatomy & Physiology **OR** *Anatomy and Physiology* **OR** *Anatomy and Physiology Honors*	ANY HEALTH OCCUP G (See DOE approved list)	1 credit	31-9099	3	EQ
8417110	Health Science Foundations		1 credit	31-9099	3	CT
8417231	Vision Care Assisting 3	TEC OPTICS 7G	1 credit	29-2081	3	CT
8417232	Vision Care Assisting 4		1 credit	29-2081	3	CT

(Graduation Requirement Codes: CT= Career & Technical Education, EQ= Equally Rigorous Science, EC= Economics, MA= Mathematics, PL= Personal Financial Literacy)

Florida's Career Readiness Skills for CTE Programs

Employability Skills	
01.0	Apply academic skills to workplace scenarios.
01.01	Use reading skills.
01.02	Use writing skills.
01.03	Use mathematical strategies and procedures.
01.04	Use scientific principles and procedures.
02.0	Design a solution to an industry problem.
02.01	Use critical thinking.
02.02	Use creativity.
02.03	Make sound decisions.
02.04	Solve problems.
02.05	Reason.
02.06	Plan and organize.
03.0	Manage resources within an industry project
03.01	Manage time.
03.02	Manage money or resources.
03.03	Manage materials.
03.04	Manage personnel.
04.0	Oversee the subcomponents, operations and output of a technical or organizational system.
04.01	Manage systems.
04.02	Monitor systems.
04.03	Improve systems.
05.0	Use information for decision making.
05.01	Locate information.
05.02	Organize information.
05.03	Use information.

	05.04 Analyze information.
	05.05 Communicate information.
06.0	Apply relevant technology to workplace scenarios to aid productivity.
	06.01 Use technology.
07.0	Interpret and express interpersonal communication.
	07.01 Communicate verbally.
	07.02 Listen actively.
	07.03 Comprehend written material.
	07.04 Convey information in writing.
	07.05 Communicate nonverbally.
	07.06 Interpret nonverbal communication.
08.0	Interact with others to accomplish workplace goals.
	08.01 Collaborate with others in a team.
	08.02 Respond to customer needs.
	08.03 Exercise leadership.
	08.04 Negotiate to resolve conflict.
	08.05 Respect others.
09.0	Manage personal behavior to maximize productivity and professional growth.
	09.01 Demonstrate responsibility and self-discipline.
	09.02 Adapt and show flexibility.
	09.03 Work independently.
	09.04 Demonstrate a willingness to learn.
	09.05 Demonstrate integrity.
	09.06 Demonstrate professionalism.
	09.07 Take initiative.
	09.08 Display positive attitude.
	09.09 Take responsibility for professional growth.

Career Exploration & Planning	
10.0	Explain career opportunities aligned with the regional economy and personal aspirations.
10.01	Describe regional occupations that are high-demand, high-growth, high-wage and/or high-skill.
10.02	Describe careers aligned with his or her interests, skills and values based on career assessment, experiential learning, career informational interviews, research and/or reflection.
11.0	Explain postsecondary pathways aligned with his or her career aspirations.
11.01	Compare and contrast postsecondary pathways, including education, employment, entrepreneurship and enlistment (the “Four Es”).
11.02	Compare and contrast regional postsecondary training provider options, including apprenticeships, technical colleges, state colleges, universities and industry-recognized certification providers.
11.03	Define postsecondary credentialing and stacking options, including industry-recognized certifications, apprenticeship certificates of completion, career certificates, licenses and associate or baccalaureate degrees.
11.04	Compare postsecondary training data for training programs of interest, such as total costs, average student loan debt, and median earnings and job placement rates after program completion.
12.0	Develop a personalized career and academic plan.
12.01	Prioritize an occupation, credential and postsecondary training provider for plan formation.
12.02	Self-assess progress toward meeting graduation requirements and skill-development goals.
12.03	Develop and complete a chronological checklist of steps and deadlines prior to postsecondary training or national service application that includes any required documentation to gather, writing prompts and examinations.
12.04	Identify a variety of financial aid opportunities, including scholarships, grants, savings, work, work-study programs, private loans and federal loans.
12.05	Develop a postsecondary training budget that is inclusive of living and school expenses.
Job Attainment	
13.0	Find, assess and apply to job opportunities.
13.01	Identify online job posts relevant to his or her career aspirations.
13.02	Compare and contrast the job posts’ required qualifications, job duties, compensation, benefits and employers.
13.03	Define what information, documentation and writing prompts are required for the positions.
14.0	Communicate personal competence, character and fit for a job opportunity.
14.01	Develop a resume.
14.02	Write a cover letter.
14.03	Curate a professional portfolio that includes work products.
14.04	Prepare for and experience a mock job interview.

15.0	Cultivate and leverage relationships to professionally advance.
	15.01 Request a signed reference letter, letter of recommendation and/or an online skill/professionalism endorsement.
	15.02 Develop a plan to cultivate a professional digital footprint.
	15.03 Develop a networking plan for a specific industry of interest.

Standards

After successfully completing this program, the student will be able to perform the following:

Health Science Core

01.0 Analyze and interpret an overview of the human body, including organization and chemical process.
02.0 Apply correct medical terminology relating to body structure and function within a real-world application.
03.0 Evaluate cells and tissues microscopically and macroscopically and relate their specialized functions.
04.0 Analyze the integumentary system in relation to health and disease.
05.0 Analyze the skeletal system in relation to health and disease.
06.0 Analyze the muscular system in relation to health and disease.
07.0 Analyze the nervous system in relation to health and disease.
08.0 Analyze the endocrine system in relation to health and disease.
09.0 Analyze the cardiovascular/circulatory system in relation to health and disease.
10.0 Analyze the lymphatic and immune systems in relation to health and disease.
11.0 Analyze the respiratory system in relation to health and disease.
12.0 Analyze the digestive system in relation to health and disease.
13.0 Analyze the urinary system in relation to health and disease.
14.0 Analyze both the male and female reproductive systems in relation to health and disease.
15.0 Identify and explain factors relating to genetics and disease.
16.0 Evaluate and apply the principles of disease transmission and control to real-world scenarios.
17.0 Demonstrate knowledge of the healthcare delivery system and health occupations.
18.0 Demonstrate the ability to communicate and use interpersonal skills effectively.
19.0 Demonstrate legal and ethical responsibilities.
20.0 Demonstrate an understanding of and apply wellness and disease concepts.
21.0 Recognize and practice safety and security procedures.
22.0 Recognize and respond to emergency situations.
23.0 Recognize and practice infection control procedures.
24.0 Demonstrate an understanding of information technology applications in healthcare.
25.0 Demonstrate employability skills.
26.0 Demonstrate knowledge of blood borne diseases, including HIV/AIDS.
27.0 Apply basic math and science skills.

Vision Care Assisting 3

28.0 Demonstrate knowledge of the visual system.
29.0 Gather patient history and all relevant data in preparation for a complete eye exam.
30.0 Prepare patients for and assist in testing for eye disorders.
31.0 Perform medical administrative office tasks.
32.0 Recognize patient needs in relation to lens characteristics.

33.0 Demonstrate knowledge of frame selection techniques used in a dispensing office setting.

Vision Care Assisting 4

34.0 Demonstrate knowledge of frame adjustment and alignment.
35.0 Demonstrate and perform basic skills relating to lenses.
36.0 Edge, tint and inspect a pair of glass or plastic lenses and insert into a frame.
37.0 Dispense optical supplies.

Florida Department of Education
Student Performance Standards

Health Science Core:

The first two courses in this program are referred to as the Health Science Core and consist of the courses Health Science Anatomy & Physiology (8417100) and Health Science Foundations (8417110). **To ensure consistency whenever these courses are offered, the standards and benchmarks for the health science core have been placed in a separate document. To access this document, visit this link:** https://www.fldoe.org/file/20894/health-sci-core-secondary-2627.rtf

The two credit core is required as a prerequisite for all secondary programs except for Practical Nursing and Pharmacy Technician. Secondary students completing the two required courses will not have to repeat the core in postsecondary. When the recommended sequence is followed, the structure allows students to complete at specified courses for employment or remain for advanced training or cross-training.

Course Title: **Health Science Anatomy & Physiology**
Course Number: **8417100**
Course Credit: **1**

Course Description:

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as, experimental quality, and safety procedures will be an integral part of this course. Students will interact with materials and primary sources of data or with secondary sources of data to observe and understand the natural world. Students will develop an understanding of measurement error, and develop the skills to aggregate, interpret, and present the data and resulting conclusions. Equipment and supplies will be provided to enhance these hands-on experiences for students. A minimum of 20% of classroom time will be dedicated to laboratory experiences.

This course is part of the secondary Health Core consisting of an overview of the human body, both structurally and functionally with emphasis on the pathophysiology and transmission of disease. Medical terminology is an integral part of the course.

The course Anatomy and Physiology (2000350) or Anatomy and Physiology Honors (2000360) may be substituted for the course Health Science Anatomy & Physiology (8417100).

The course Health Science Anatomy & Physiology (8417100) is designated as an equally rigorous (EQ) science credit.

Course Title: **Health Science Foundations**
Course Number: **8417110**
Course Credit: **1**

Course Description:
This course is part of the Secondary Health Core designed to provide the student with an in depth knowledge of the health care system and associated occupations. Emphasis is placed on communication and interpersonal skills, use of technology, ethics and the development of critical thinking and problem solving skills. Students may shadow professionals throughout the course.

Florida Department of Education
Student Performance Standards

Course Title: **Vision Care Assisting 3**
Course Number: **8417231**
Course Credit: **1**

Course Description:

This course is one of the two courses that prepare students to be Vision Care Assistants. Content includes, but is not limited to, care and maintenance of contact lenses and eyewear, basic skills pertaining to lens manufacturing, office support skills and patient safety.

CTE Standards and Benchmarks	
28.0	Demonstrate knowledge of the visual system. The students will be able to:
28.01	Identify the anatomy of the eye.
28.02	Describe the physiology of each part of the eye.
28.03	Describe the visual pathway.
28.04	Define refractive errors.
28.05	Explain the most common conditions of the eye.
29.0	Gather patient history and all relevant data in preparation for a complete eye exam. The students will be able to:
29.01	Record personal information and the patient's chief complaint.
29.02	Record the patient's medical and ocular history.
29.03	Record the family's medical and ocular history using proper medical abbreviations.
29.04	Identify preexisting conditions and medications affecting the eye.
29.05	Elicit information with respect to current pertinence for examination.
30.0	Prepare patients for and assist in testing for eye disorders. The students will be able to:
30.01	Accurately take and record patient blood pressure, pulse, height and weight.
30.02	Accurately screen and record patient visual acuity.

CTE Standards and Benchmarks	
	30.03 Accurately evaluate and record. • Dominant eye and hand. • Cover test for muscular imbalance. • Saccadic for erratic eye movements. • Near point of convergence. • Pursuits, rotations and versions.
	30.04 Demonstrate knowledge of selected instruments used in determining specific eye disorders.
31.0	Perform medical administrative office tasks. The students will be able to:
	31.01 Schedule and confirm appointments.
	31.02 Process all types of incoming and outgoing correspondence.
	31.03 Organize office procedures from a management perspective. • Verification of insurance benefits. • Medical records management. • Insurance claims procedures.
	31.04 Perform filing using a variety of methods.
	31.05 Implement appropriate joint commission patient safety goals.
	31.06 Manage frame boards.
32.0	Recognize patient needs in relation to lens characteristics. The students will be able to:
	32.01 Interpret the various symbols and abbreviations in a written eyeglass and contact lens prescription.
	32.02 Distinguish lens criteria for myopic, hyperopic, astigmatic and presbyopic correction.
	32.03 Identify the different designs of multifocal lenses to fit the patient's needs.
	32.04 Calculate focal lengths from dipotric values.
	32.05 Measure vertex distance and compensate for contact lens use.
	32.06 Accurately measure a patient's needs with the use of a phoropter.
	32.07 Define prism imbalance, vertical imbalance and full imbalance.
	32.08 Identify the effects of optical prism on lenses.

CTE Standards and Benchmarks	
	32.09 Describe the effects of types of tint on the eye.
	32.010 Estimate the best transmission value related to light.
33.0	Demonstrate knowledge of frame selection techniques used in a dispensing office setting. The students will be able to:
	33.01 Distinguish between square, round, rectangular, oblong and oval features.
	33.02 Compare features with large, long and small nasal attributes.
	33.03 Contrast hair and skin tone.
	33.04 Select a frame such that the horizontal and vertical fit the patient's needs.
	33.05 Select a frame such that the material and color fit the patient's needs.
	33.06 Select a frame considering lens thickness and material.
	33.07 Select a frame considering temple length.
	33.08 Identify and record frame measurements and markings.

Florida Department of Education
Student Performance Standards

Course Title: **Vision Care Assisting 4**
Course Number: **8417232**
Course Credit: **1**

Course Description:

This course is the second of two courses that prepare students to be Vision Care Assistants. Content includes, but is not limited to, creation and completion of eyewear, frame selection techniques, frame adjustment and alignment, patient needs in relation to eyewear, compiling a patient case history as well as assisting in eye disorder testing.

CTE Standards and Benchmarks	
34.0	Demonstrate knowledge of frame adjustment and alignment. The students will be able to:
34.01	Identify frame parts and materials.
34.02	Demonstrate knowledge of frame measurement.
34.03	Demonstrate pupillary distance measurement.
34.04	Demonstrate frame selection considering customer and frame characteristics.
34.05	Select correct frame and bridge size.
34.06	Verify prescription information.
34.07	Perform frame adjustment and alignment.
34.08	Perform frame repairs.
34.09	Identify occupational eyewear and special purpose frames.
35.0	Demonstrate and perform basic skills relating to lenses. The students will be able to:
35.01	Use a manual lensometer.
35.02	Find the optical center of a sphere and a spherocylindrical lens in a manual lensometer.
35.03	Convert a lens according to the principals of toric transposition.
35.04	Duplicate a pair of prescription eyeglasses.

CTE Standards and Benchmarks	
	35.05 Calculate lens size.
	35.06 Calculate decentration.
	35.07 Demonstrate knowledge of lens tinting.
	35.08 Check finished product against ANSI standards.
36.0	Edge, tint and inspect a pair of glass or plastic lenses and insert into a frame. The students will be able to:
	36.01 Spot the optical center on any given axis in a pair of single vision, bifocal, or progressive lenses.
	36.02 Decenter and block any given lens avoiding unwanted prism.
	36.03 Edge any single vision or multifocal lens to mount in a plastic, metal, semi-rimless and rimless frame.
	36.04 Apply a safety bevel.
	36.05 Tint and coat various lenses.
	36.06 Insert lens into a frame.
	36.07 Inspect completed spectacles to meet ANSI Standards.
37.0	Dispense optical supplies. The students will be able to:
	37.01 Select frames according to prescription suitability, color, style and size.
	37.02 Fill out Rx card completely and correctly.
	37.03 Take proper patient measurements.
	37.04 Dispense eyewear.
	37.05 Adjust frames to patient’s face using standard alignment.
	37.06 Manage frame-boards.
	37.07 Dispense contact lenses.
	37.08 Describe types and care systems for contact lenses.
	37.09 Demonstrate insertion and removal techniques of contact lenses.

CTE Standards and Benchmarks	
	37.10 Use keratometer.
	37.11 Demonstrate knowledge of frame repair.
38.0	Demonstrate knowledge of effective business management operation techniques. The students will be able to:
	38.01 Develop a small business plan of operation
	38.02 Develop an office procedure manual
	38.03 Demonstrate knowledge of finances, operating expenses, and inventory
	38.04 Demonstrate knowledge of marketing and office set up.

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as, experimental, quality, and safety procedures are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate and troubleshoot equipment/tools used to make observations. Students understand measurement error; and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

This program requires a clinical component of approximately 50% the length of the courses following the health science core. A portion of the clinical experience can be achieved through simulation when appropriate.

Clinical courses require contact hours in the clinical setting in order to complete the health science program. Hospitals, nursing homes, and other clinical facilities with clinical affiliation agreements limit the number of students that can rotate and/or be on site at one time. Most facilities, including hospitals and nursing homes, limit the number of students to 15. Due to these industry limitations, it is recommended that the student ratio be 15:1 (student/teacher) based on the clinical facilities that students attend to for clinical training.

Florida Standards for English Language Development (ELD)

English language learners communicate for social and instructional purposes within the school setting. ELD.K12.ELL.SI.1

English Language Development (ELD) Standards Special Notes:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. For additional information on the development and implementation of the ELD standards, please contact the Bureau of Student Achievement through Language Acquisition at sala@fldoe.org .

Special Notes

Following the completion of the Health Science Core, the student is eligible to take the National Health Care Foundation Skill Standards Assessment with instructor approval and the completion of a portfolio.

This program meets the Department of Health's education requirements for HIV/AIDS, Domestic Violence and Prevention of Medical Errors. Although not a requirement for initial licensure, it is a requirement for renewal, therefore the instructor **may** provide a certificate for renewal purposes to the student verifying these requirements have been met.

If students in this program are seeking a licensure, certificate or registration through the Department of Health, please refer to 456.0635, F.S. for more information on disqualification for a license, certificate, or registration through the Department of Health.

Career and Technical Student Organization (CTSO)

CTSOs are co-curricular career and technical student organizations providing leadership training and reinforcing specific career and technical skills. Career and Technical Student Organizations provide activities for students as an integral part of the instruction offered. Other CTSOs not listed in this curriculum framework or recognized by the Florida Department of Education are permissible provided they support student mastery over the standards and benchmarks of this curriculum framework.

Cooperative Training – OJT

On-the-job training is appropriate but not required for this program. Whenever offered, the rules, guidelines, and requirements specified in the OJT framework apply.

Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities as identified on the secondary student's Individual Educational Plan (IEP) or 504 plan or postsecondary student's accommodations' plan to meet individual needs and ensure equal access. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

In addition to accommodations, some secondary students with disabilities (students with an IEP served in Exceptional Student Education (ESE)) will need modifications to meet their needs. Modifications change the outcomes or what the student is expected to learn, e.g., modifying the curriculum of a secondary career and technical education course. Note: postsecondary curriculum and regulated secondary programs cannot be modified.

Some secondary students with disabilities (ESE) may need additional time (i.e., longer than the regular school year), to master the student performance standards associated with a regular course or a modified course. If needed, a student may enroll in the same career and technical course more than once. Documentation should be included in the IEP that clearly indicates that it is anticipated that the student may need an additional year to complete a Career and Technical Education (CTE) course. The student should work on different competencies and new applications of competencies each year toward completion of the CTE course. After achieving the competencies identified for the year, the student earns credit for the course. It is important to ensure that credits earned by students are reported accurately. The district's information system must be designed to accept multiple credits for the same course number for eligible students with disabilities.

Florida Department of Education
Curriculum Framework

Program Title: **Health Unit Coordinator**
Program Type: **Career Preparatory**
Career Cluster: **Health Science**

Secondary – Career Preparatory	
Program Number	8417280
CIP Number	0351070301
Grade Level	9-12
Program Length	4 credits
Teacher Certification	Refer to the **Program Structure** section.
CTSO	HOSA
SOC Codes (all applicable)	43-6013 -- Medical Secretaries 31-9099 -- Healthcare Support Workers, All Other
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml

Purpose

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Health Science career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of Health Science career cluster.

This program is designed to prepare students for employment as health unit clerks or health unit coordinators SOC 43-6013 (Medical Secretaries). Transcription of physicians' orders is an integral part of this course.

The content includes but is not limited to planning, management, finance, technical and production skills, underlying principles of technology, labor issues, community issues and health, safety, and environmental issues, simulated practice with standard equipment and supplies used in a health care facility by the health unit coordinator. Clinical learning experiences are an integral part of this program.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Program Structure

This program is a planned sequence of instruction totaling four credits. The two credit Health Science Core (Health Science Anatomy & Physiology 8417100 and Health Science Foundations 8417110) is required as a prerequisite for all programs and options. Secondary students completing the two required courses will not have to repeat the core in postsecondary.

To teach the courses listed below, instructors must hold at least one of the teacher certifications indicated for that course.

The following table illustrates the secondary program structure:

Course Number	Course Title	Teacher Certification	Length	SOC Code	Level	Graduation Requirement
8417100 **OR** *2000350* **OR** *2000360*	Health Science Anatomy & Physiology **OR** *Anatomy and Physiology* **OR** *Anatomy and Physiology Honors*	ANY HEALTH OCCUP G (See DOE approved list)	1 credit	31-9099	3	EQ
8417110	Health Science Foundations		1 credit	31-9099	3	CT
8417281	Health Unit Coordinator 1	REG NURSE 7 G MED RECTEC 7G PRAC NURSE @7 %7%G (Must be a Registered Nurse)	1 credit	43-6013	2	CT
8417282	Health Unit Coordinator 2		1 credit	43-6013	2	CT

(Graduation Requirement Codes: CT= Career & Technical Education, EQ= Equally Rigorous Science, EC= Economics, MA= Mathematics, PL= Personal Financial Literacy)

Florida's Career Readiness Skills for CTE Programs

Employability Skills	
01.0	Apply academic skills to workplace scenarios.
01.01	Use reading skills.
01.02	Use writing skills.
01.03	Use mathematical strategies and procedures.
01.04	Use scientific principles and procedures.
02.0	Design a solution to an industry problem.
02.01	Use critical thinking.
02.02	Use creativity.
02.03	Make sound decisions.
02.04	Solve problems.
02.05	Reason.
02.06	Plan and organize.
03.0	Manage resources within an industry project
03.01	Manage time.
03.02	Manage money or resources.
03.03	Manage materials.
03.04	Manage personnel.
04.0	Oversee the subcomponents, operations and output of a technical or organizational system.
04.01	Manage systems.
04.02	Monitor systems.
04.03	Improve systems.
05.0	Use information for decision making.
05.01	Locate information.
05.02	Organize information.
05.03	Use information.

	05.04 Analyze information.
	05.05 Communicate information.
06.0	Apply relevant technology to workplace scenarios to aid productivity.
	06.01 Use technology.
07.0	Interpret and express interpersonal communication.
	07.01 Communicate verbally.
	07.02 Listen actively.
	07.03 Comprehend written material.
	07.04 Convey information in writing.
	07.05 Communicate nonverbally.
	07.06 Interpret nonverbal communication.
08.0	Interact with others to accomplish workplace goals.
	08.01 Collaborate with others in a team.
	08.02 Respond to customer needs.
	08.03 Exercise leadership.
	08.04 Negotiate to resolve conflict.
	08.05 Respect others.
09.0	Manage personal behavior to maximize productivity and professional growth.
	09.01 Demonstrate responsibility and self-discipline.
	09.02 Adapt and show flexibility.
	09.03 Work independently.
	09.04 Demonstrate a willingness to learn.
	09.05 Demonstrate integrity.
	09.06 Demonstrate professionalism.
	09.07 Take initiative.
	09.08 Display positive attitude.
	09.09 Take responsibility for professional growth.

Career Exploration & Planning	
10.0	Explain career opportunities aligned with the regional economy and personal aspirations.
10.01	Describe regional occupations that are high-demand, high-growth, high-wage and/or high-skill.
10.02	Describe careers aligned with his or her interests, skills and values based on career assessment, experiential learning, career informational interviews, research and/or reflection.
11.0	Explain postsecondary pathways aligned with his or her career aspirations.
11.01	Compare and contrast postsecondary pathways, including education, employment, entrepreneurship and enlistment (the “Four Es”).
11.02	Compare and contrast regional postsecondary training provider options, including apprenticeships, technical colleges, state colleges, universities and industry-recognized certification providers.
11.03	Define postsecondary credentialing and stacking options, including industry-recognized certifications, apprenticeship certificates of completion, career certificates, licenses and associate or baccalaureate degrees.
11.04	Compare postsecondary training data for training programs of interest, such as total costs, average student loan debt, and median earnings and job placement rates after program completion.
12.0	Develop a personalized career and academic plan.
12.01	Prioritize an occupation, credential and postsecondary training provider for plan formation.
12.02	Self-assess progress toward meeting graduation requirements and skill-development goals.
12.03	Develop and complete a chronological checklist of steps and deadlines prior to postsecondary training or national service application that includes any required documentation to gather, writing prompts and examinations.
12.04	Identify a variety of financial aid opportunities, including scholarships, grants, savings, work, work-study programs, private loans and federal loans.
12.05	Develop a postsecondary training budget that is inclusive of living and school expenses.
Job Attainment	
13.0	Find, assess and apply to job opportunities.
13.01	Identify online job posts relevant to his or her career aspirations.
13.02	Compare and contrast the job posts’ required qualifications, job duties, compensation, benefits and employers.
13.03	Define what information, documentation and writing prompts are required for the positions.
14.0	Communicate personal competence, character and fit for a job opportunity.
14.01	Develop a resume.
14.02	Write a cover letter.
14.03	Curate a professional portfolio that includes work products.
14.04	Prepare for and experience a mock job interview.

15.0	Cultivate and leverage relationships to professionally advance.
	15.01 Request a signed reference letter, letter of recommendation and/or an online skill/professionalism endorsement.
	15.02 Develop a plan to cultivate a professional digital footprint.
	15.03 Develop a networking plan for a specific industry of interest.

Standards

After successfully completing this program, the student will be able to perform the following:

Health Science Core

01.0 Analyze and interpret an overview of the human body, including organization and chemical process.
02.0 Apply correct medical terminology relating to body structure and function within a real-world application.
03.0 Evaluate cells and tissues microscopically and macroscopically and relate their specialized functions.
04.0 Analyze the integumentary system in relation to health and disease.
05.0 Analyze the skeletal system in relation to health and disease.
06.0 Analyze the muscular system in relation to health and disease.
07.0 Analyze the nervous system in relation to health and disease.
08.0 Analyze the endocrine system in relation to health and disease.
09.0 Analyze the cardiovascular/circulatory system in relation to health and disease.
10.0 Analyze the lymphatic and immune systems in relation to health and disease.
11.0 Analyze the respiratory system in relation to health and disease.
12.0 Analyze the digestive system in relation to health and disease.
13.0 Analyze the urinary system in relation to health and disease.
14.0 Analyze both the male and female reproductive systems in relation to health and disease.
15.0 Identify and explain factors relating to genetics and disease.
16.0 Evaluate and apply the principles of disease transmission and control to real-world scenarios.
17.0 Demonstrate knowledge of the healthcare delivery system and health occupations.
18.0 Demonstrate the ability to communicate and use interpersonal skills effectively.
19.0 Demonstrate legal and ethical responsibilities.
20.0 Demonstrate an understanding of and apply wellness and disease concepts.
21.0 Recognize and practice safety and security procedures.
22.0 Recognize and respond to emergency situations.
23.0 Recognize and practice infection control procedures.
24.0 Demonstrate an understanding of information technology applications in healthcare.
25.0 Demonstrate employability skills.
26.0 Demonstrate knowledge of blood borne diseases, including HIV/AIDS.
27.0 Apply basic math and science skills.

Health Unit Coordinator 1

28.0 Use oral and written communication skills in creating, expressing and interpreting information and ideas.
29.0 Describe the importance of professional ethics and legal responsibilities for the health unit coordinator.
30.0 Interpret and apply medical terminology specific to health unit clerks.
31.0 Organize and maintain efficient work practices.
32.0 Perform clerical duties.
33.0 Perform patient admission, transfer and discharge procedures.

34.0 Prepare discharge/transfer chart for medical records/new unit.

Health Unit Coordinator 2

35.0 Demonstrate the importance of health, safety, and environmental management systems in organizations and their importance to organizational performance and regulatory compliance.
36.0 Read, interpret, process, coordinate and transcribe physicians' orders.
37.0 Demonstrate an understanding of the Health Unit Coordinators role in the nutritional care department.
38.0 Demonstrate an understanding of the Health Unit Coordinators role in processing diagnostic orders.
39.0 Explain the importance of employability skills and entrepreneurship skills for the health unit coordinator.

Florida Department of Education
Student Performance Standards

Health Science Core

The first two courses in this program are referred to as the Health Science Core and consist of the courses Health Science Anatomy & Physiology (8417100) and Health Science Foundations (8417110). **To ensure consistency whenever these courses are offered, the standards and benchmarks for the health science core have been placed in a separate document. To access this document, visit this link:** https://www.fldoe.org/file/20894/health-sci-core-secondary-2627.rtf

The two credit core is required as a prerequisite for all secondary programs except for Practical Nursing and Pharmacy Technician. Secondary students completing the two required courses will not have to repeat the core in postsecondary. When the recommended sequence is followed, the structure allows students to complete at specified courses for employment or remain for advanced training or cross-training.

Course Title: **Health Science Anatomy & Physiology**
Course Number: **8417100**
Course Credit: **1**

Course Description:

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as, experimental quality, and safety procedures will be an integral part of this course. Students will interact with materials and primary sources of data or with secondary sources of data to observe and understand the natural world. Students will develop an understanding of measurement error, and develop the skills to aggregate, interpret, and present the data and resulting conclusions. Equipment and supplies will be provided to enhance these hands-on experiences for students. A minimum of 20% of classroom time will be dedicated to laboratory experiences.

This course is part of the secondary Health Core consisting of an overview of the human body, both structurally and functionally with emphasis on the pathophysiology and transmission of disease. Medical terminology is an integral part of the course.

The course Anatomy and Physiology (2000350) or Anatomy and Physiology Honors (2000360) may be substituted for the course Health Science Anatomy & Physiology (8417100).

The course Health Science Anatomy & Physiology (8417100) is designated as an equally rigorous (EQ) science credit.

Course Title: **Health Science Foundations**
Course Number: **8417110**
Course Credit: **1**

Course Description:
This course is part of the Secondary Health Core designed to provide the student with an in depth knowledge of the health care system and associated occupations. Emphasis is placed on communication and interpersonal skills, use of technology, ethics and the development of critical thinking and problem solving skills. Students may shadow professionals throughout the course.

Florida Department of Education
Student Performance Standards

Course Title: **Health Unit Coordinator 1**
Course Number: **8417281**
Course Credit: **1**

Course Description:

This course prepares students to be employed as Health Unit Coordinators/Health Unit Clerks. Content includes, but is not limited to, medical terminology, organization and efficiency in the workplace, computer operations, as well as aiding in physicians' orders.

CTE Standards and Benchmarks	
28.0	Use oral and written communication skills in creating, expressing, and interpreting information and ideas. The student will be able to:
28.01	Apply basic speaking and active listening skills including reflection, restatement, and clarification techniques when using the telephone and answering patient call lights.
28.02	Recognize the importance of courtesy and respect for patients and other health care workers and maintain good interpersonal relationships.
28.03	Adapt communication skills to varied levels of understanding and cultural orientation including diverse age, cultural, economic, ethnic and religious groups.
28.04	Apply active listening skills to obtain and clarify information.
28.05	Exhibit public relations skills that aid in achieving customer satisfaction including face to face interactions.
28.06	Explain why implementation of the electronic medical record is requiring advanced communication skills for the health unit coordinator (HUC).
28.07	Give instances that exemplify human needs, classify each according to Maslow's hierarchy of human needs, and give appropriate responses to meet the listed needs.
28.08	Define and explain the importance of culturally sensitive care in the health care setting.
28.09	List five guidelines to follow that could improve intercultural communication.
29.0	Describe the importance of professional ethics and legal responsibilities for the health unit coordinator. The student will be able to:
29.01	List seven patient rights as outlined in HIPAA.
29.02	Identify seven patient identifiers (individually identifiable health information [IIHI]).
29.03	Explain two purposes of the Health Information Technology for Economic and Clinical Health (HITECH) Act.

CTE Standards and Benchmarks	
	29.04 Explain the responsibilities the health unit coordinator (HUC) has for HIPAA compliance.
	29.05 Evaluate alternative responses to workplace situations based on personal, professional, ethical, legal responsibilities, and employer policies.
30.0	Interpret and apply medical terminology specific to health unit clerks. The student will be able to:
	30.01 Identify components of medical terms.
	30.02 Spell, pronounce and define medical terms, as related to health unit coordinator.
	30.03 Relate medical terminology to the body systems.
	30.04 Identify and define standard abbreviations and medical symbols.
	30.05 Identify apothecary and metric systems.
31.0	Organize and maintain efficient work practices. The student will be able to:
	31.01 Arrange daily activities by priority.
	31.02 Prepare and post unit information lists.
	31.03 Maintain a supply of assembled medical/surgical admission packets when using paper charts or standard forms.
	31.04 Distribute forms and articles from in-basket.
	31.05 Identify, store and maintain unit equipment/supplies in a neat and orderly manner.
	31.06 Sanitize nursing station equipment.
	31.07 Maintain par levels of supplies as required by the nursing unit.
	31.08 Greet all visitors to the nursing unit and offer assistance as necessary.
32.0	Perform clerical duties. The student will be able to:
	32.01 Demonstrate knowledge of common software applications relevant to the role of the health unit coordinator.
	32.02 Prepare, label, and add forms to chart.
	32.03 Record non-clinical admission data on unit records.
	32.04 Obtain previous admission records/X-rays.

CTE Standards and Benchmarks	
	32.05 Post all reports on charts.
	32.06 File and retrieve assorted forms.
	32.07 Maintain patient tracking for patients leaving the unit (electronic or paper log).
	32.08 Conduct “downtime” procedure when electronic medical record program is unavailable due to scheduled downtime or unexpected downtime.
33.0	Perform patient admission, transfer, and discharge procedures. The student will be able to:
	33.01 List four types of admissions and three types of patients.
	33.02 List the common components of a set of admission orders and common health unit coordinator (HUC) tasks regarding the patient’s admission when paper charts are used.
	33.03 Describe how a surgical patient’s admission orders differ from a medical patient’s admission orders and discuss three options for the way in which patient surgeries are performed.
	33.04 List the components that may be included in a set of pre/postoperative orders.
	33.05 Explain why it is important for the HUC to monitor the patient’s electronic medical record (EMR) consistently.
	33.06 Explain the purpose and the benefits of the electronic patient status tracking board for the patient’s family and/or friends.
	33.07 Explain what the HUC’s responsibility would be regarding all medical records, including patient signed consent forms, handwritten progress notes, and reports faxed or sent from other facilities or brought in by a patient when the EMR with computer physician order entry (CPOE) is implemented.
34.0	Prepare discharge/transfer chart for medical records/new unit. The student will be able to:
	34.01 List the different types of discharges and explain the importance of communicating pending discharge information and bed availability to the admitting department or bed placement in a timely manner.
	34.02 List the tasks that may be required to complete a routine discharge.
	34.03 List the additional tasks that may be required when a patient is discharged to another facility, discharged home with assistance, or when a patient dies (postmortem).
	34.04 Describe the tasks necessary to prepare the discharged patient’s medical record for the health information management services (HIMS) department when paper charts are used.
	34.05 List the tasks that are performed when a patient is transferred from one unit to another.
	34.06 List the tasks performed by the HUC when a patient is transferred from one room to another room on the same unit.
	34.07 Discuss the importance of reading the entire set of discharge or transfer orders prior to the patient being discharged or transferred.

Florida Department of Education
Student Performance Standards

Course Title: **Health Unit Coordinator 2**
Course Number: **8417282**
Course Credit: **1**

Course Description:

This course prepares students to be employed as Health Unit Coordinators/Health Unit Clerks. Content includes, but is not limited to, medical terminology, organization and efficiency in the workplace, computer operations, as well as aiding in Physicians' orders.

CTE Standards and Benchmarks	
35.0	Demonstrate the importance of health, safety, and environmental management systems in organizations and their importance to organizational performance and regulatory compliance. The student will be able to:
35.01	Describe personal and jobsite safety rules and regulations that maintain safe and healthy work environments.
35.02	Participate in emergency or disaster plan, CPR, and first aid.
35.03	Identify the location of emergency equipment on the nursing unit.
35.04	Recognize and follow all appropriate emergent code protocols.
35.05	Comply with regulatory agency guidelines.
36.0	Read, interpret, process, coordinate and transcribe physicians' orders. The student will be able to:
36.01	Identify all types of physician's orders.
36.02	Prioritize orders for transcription.
36.03	Prepare and route requisitions manually or via computer.
36.04	Arrange for ordered consultations.
36.05	Schedule patients' treatments or therapy with other hospital departments.
37.0	Demonstrate an understanding of the health unit coordinators role in the nutritional care department. The student will be able to:
37.01	Explain the importance of communicating diet changes and patient food allergies to the nutritional care department.
37.02	List the groups of diets including nutritional supplements that may be ordered for the hospitalized patient.

CTE Standards and Benchmarks	
	37.03 List consistency changes that can be made to a standard diet and explain what is included in each.
	37.04 List diet options that may be selected for the patient who has started on clear liquids and has an order for diet as tolerated and explain how the selection would be made.
	37.05 Identify therapeutic diets that the patient's doctor may order.
	37.06 Identify diets that may be requested by patients and assist them in ordering appropriate meals.
	37.07 List the items an HUC may need to order when transcribing an order for tube feeding.
	37.08 Explain the purpose of the doctors' orders force fluids, limit fluids, and calorie count.
	37.09 Discuss the importance of sending all doctors' orders regarding a patient's diet or modifications to a patient's diet to the nutritional care department.
	37.10 Discuss the importance of sending total parenteral nutrition (TPN) orders to the pharmacy in a timely manner via fax, pneumatic, or dumb waiter system.
38.0	Demonstrate an understanding of the health unit coordinators role in processing diagnostic orders. The student will be able to:
	38.01 List the major divisions of the clinical laboratory and their functions.
	38.02 List six invasive procedures that would require a consent form signed by the patient.
	38.03 Describe the health unit coordinator's responsibilities in ordering laboratory tests and sending specimens to the laboratory when EMR is used and when paper charts are used and describe how routine, stat, daily, and timed studies would be ordered and performed.
	38.04 Explain how the health unit coordinator's responsibilities regarding diagnostic imaging orders differ with the implementation of the electronic medical record and computer physician order entry versus use of the paper chart.
	38.05 List the required patient information needed when ordering procedures to be performed by the diagnostic imaging department.
	38.06 Explain when a patient would be required to sign an informed consent before a diagnostic imaging procedure.
	38.07 Discuss sequencing or scheduling of multiple diagnostic imaging procedures ordered for the same patient.
	38.08 Demonstrate an understanding of other diagnostic studies.
39.0	Explain the importance of employability skills and entrepreneurship skills for the health unit coordinator. The student will be able to:
	39.01 Discuss benefits and responsibilities of the HUC as a member of a professional organization such as the National Association of Health Unit Coordinators.
	39.02 List five benefits of becoming a certified HUC.

CTE Standards and Benchmarks
39.03 List three positions in which the HUC may be cross-trained.
39.04 Compose written communication including emails using correct spelling, grammar, formatting and confidentiality.
39.05 Observe professional e-mail practices and etiquette.

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as, experimental, quality, and safety procedures are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate and troubleshoot equipment/tools used to make observations. Students understand measurement error; and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

This program requires a clinical component of approximately 50% the length of the courses following the health science core. A portion of the clinical experience can be achieved through simulation when appropriate.

Clinical courses require contact hours in the clinical setting in order to complete the health science program. Hospitals, nursing homes, and other clinical facilities with clinical affiliation agreements limit the number of students that can rotate and/or be on site at one time. Most facilities, including hospitals and nursing homes, limit the number of students to 15. Due to these industry limitations, it is recommended that the student ratio be 15:1 (student/teacher) based on the clinical facilities that students attend to for clinical training.

Florida Standards for English Language Development (ELD)

English language learners communicate for social and instructional purposes within the school setting. ELD.K12.ELL.SI.1

English Language Development (ELD) Standards Special Notes:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. For additional information on the development and implementation of the ELD standards, please contact the Bureau of Student Achievement through Language Acquisition at sala@fldoe.org .

Special Notes

Following the completion of Health Science Core, the student is eligible to take the National Health Care Foundation Skill Standards Assessment with instructor approval and the completion of a portfolio.

This program meets the Department of Health's education requirements for HIV/AIDS, Domestic Violence and Prevention of Medical Errors. Although not a requirement for initial licensure, it is a requirement for renewal, therefore the instructor **may** provide a certificate for renewal purposes to the student verifying these requirements have been met.

If students in this program are seeking a licensure, certificate or registration through the Department of Health, please refer to 456.0635, F.S. for more information on disqualification for a license, certificate, or registration through the Department of Health.

It is recommended that completers of this program take the National Association of Health Unit Coordinators Certification examination which is offered annually.

Career and Technical Student Organization (CTSO)

CTSOs are co-curricular career and technical student organizations providing leadership training and reinforcing specific career and technical skills. Career and Technical Student Organizations provide activities for students as an integral part of the instruction offered. Other CTSOs not listed in this curriculum framework or recognized by the Florida Department of Education are permissible provided they support student mastery over the standards and benchmarks of this curriculum framework.

Cooperative Training – OJT

On-the-job training is appropriate but not required for this program. Whenever offered, the rules, guidelines, and requirements specified in the OJT framework apply.

Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities as identified on the secondary student's Individual Educational Plan (IEP) or 504 plan or postsecondary student's accommodations' plan to meet individual needs and ensure equal access. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

In addition to accommodations, some secondary students with disabilities (students with an IEP served in Exceptional Student Education (ESE)) will need modifications to meet their needs. Modifications change the outcomes or what the student is expected to learn, e.g., modifying the curriculum of a secondary career and technical education course. Note: postsecondary curriculum and regulated secondary programs cannot be modified.

Some secondary students with disabilities (ESE) may need additional time (i.e., longer than the regular school year), to master the student performance standards associated with a regular course or a modified course. If needed, a student may enroll in the same career and technical course more than once. Documentation should be included in the IEP that clearly indicates that it is anticipated that the student may need an additional year to complete a Career and Technical Education (CTE) course. The student should work on different competencies and new applications of competencies each year toward completion of the CTE course. After achieving the competencies identified for the year, the student earns credit for the course. It is important to ensure that credits earned by students are reported accurately. The district's information system must be designed to accept multiple credits for the same course number for eligible students with disabilities.

Florida Department of Education
Curriculum Framework

The standards and benchmarks for this program were updated for the 2026-27 academic year.

Program Title: **Pharmacy Technician**
Program Type: **Career Preparatory**
Career Cluster: **Health Science**

Secondary – Career Preparatory	
Program Number	8418200
CIP Number	0317050705
Grade Level	9-12
Program Length	7 credits
Teacher Certification	Refer to the **Program Structure** section.
CTSO	HOSA, Skills USA
SOC Codes (all applicable)	29-2052 -- Pharmacy Technicians 31-9095 -- Pharmacy Aides
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml

Purpose

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Health Science career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of Health Science career cluster.

The program is designed to prepare students for employment as pharmacy technicians SOC Code 29-2052. This program focuses on broad, transferable skills and stresses understanding and demonstration of the following elements of the health care industry: planning, management, finance, technical and production skills, underlying principles of technology, labor issues, community issues, and health, safety, and environmental issues.

The content includes but is not limited to metric system, medical terminology, medicinal drugs, pharmaceutical compounding, USP 795 standards, sterile techniques, USP 797 and UPS 800 standards, maintenance of inventory, IV preparation, receiving and handling of hazardous materials, preparing purchase orders, receiving and checking supplies purchased, printing labels, typing prescription labels, delivering medications, pricing

prescription drug orders and supplies, prepackaging unit dose packages, patient record systems, control records, data processing automation in pharmacy, computer application, employability skills, leadership and human relations skills, health and safety, including CPR.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Program Structure

This program is a planned sequence of instruction totaling seven credits.

To teach the courses listed below, instructors must hold at least one of the teacher certifications indicated for that course.

The following table illustrates the secondary program structure:

Course Number	Course Title	Teacher Certification	Length	SOC Code	Level	Graduation Requirement
8418210	Pharmacy Technician 1	PHARMACY 7 G	1 credit	31-9099	3	CT
8418220	Pharmacy Technician 2		1 credit	29-2052	3	CT
8418230	Pharmacy Technician 3		1 credit	29-2052	3	CT
8418240	Pharmacy Technician 4		1 credit	29-2052	3	CT
8418250	Pharmacy Technician 5		1 credit	29-2052	3	CT
8418260	Pharmacy Technician 6		1 credit	29-2052	3	CT
8418270	Pharmacy Technician 7		1 credit	29-2052	3	CT

(Graduation Requirement Codes: CT= Career & Technical Education, EQ= Equally Rigorous Science, EC= Economics, MA= Mathematics, PL= Personal Financial Literacy)

Regulated Programs

This program is regulated by the Department of Health, Florida Board of Pharmacy.

This program must be approved by the Board of Pharmacy. Program completers who wish to work as Pharmacy Technicians in the State of Florida must register with the Board of Pharmacy (465.014, F.S.).

Florida's Career Readiness Skills for CTE Programs

Employability Skills	
01.0	Apply academic skills to workplace scenarios.
01.01	Use reading skills.
01.02	Use writing skills.
01.03	Use mathematical strategies and procedures.
01.04	Use scientific principles and procedures.
02.0	Design a solution to an industry problem.
02.01	Use critical thinking.
02.02	Use creativity.
02.03	Make sound decisions.
02.04	Solve problems.
02.05	Reason.
02.06	Plan and organize.
03.0	Manage resources within an industry project
03.01	Manage time.
03.02	Manage money or resources.
03.03	Manage materials.
03.04	Manage personnel.
04.0	Oversee the subcomponents, operations and output of a technical or organizational system.
04.01	Manage systems.
04.02	Monitor systems.
04.03	Improve systems.
05.0	Use information for decision making.
05.01	Locate information.
05.02	Organize information.
05.03	Use information.

	05.04 Analyze information.
	05.05 Communicate information.
06.0	Apply relevant technology to workplace scenarios to aid productivity.
	06.01 Use technology.
07.0	Interpret and express interpersonal communication.
	07.01 Communicate verbally.
	07.02 Listen actively.
	07.03 Comprehend written material.
	07.04 Convey information in writing.
	07.05 Communicate nonverbally.
	07.06 Interpret nonverbal communication.
08.0	Interact with others to accomplish workplace goals.
	08.01 Collaborate with others in a team.
	08.02 Respond to customer needs.
	08.03 Exercise leadership.
	08.04 Negotiate to resolve conflict.
	08.05 Respect others.
09.0	Manage personal behavior to maximize productivity and professional growth.
	09.01 Demonstrate responsibility and self-discipline.
	09.02 Adapt and show flexibility.
	09.03 Work independently.
	09.04 Demonstrate a willingness to learn.
	09.05 Demonstrate integrity.
	09.06 Demonstrate professionalism.
	09.07 Take initiative.
	09.08 Display positive attitude.
	09.09 Take responsibility for professional growth.

Career Exploration & Planning	
10.0	Explain career opportunities aligned with the regional economy and personal aspirations.
10.01	Describe regional occupations that are high-demand, high-growth, high-wage and/or high-skill.
10.02	Describe careers aligned with his or her interests, skills and values based on career assessment, experiential learning, career informational interviews, research and/or reflection.
11.0	Explain postsecondary pathways aligned with his or her career aspirations.
11.01	Compare and contrast postsecondary pathways, including education, employment, entrepreneurship and enlistment (the “Four Es”).
11.02	Compare and contrast regional postsecondary training provider options, including apprenticeships, technical colleges, state colleges, universities and industry-recognized certification providers.
11.03	Define postsecondary credentialing and stacking options, including industry-recognized certifications, apprenticeship certificates of completion, career certificates, licenses and associate or baccalaureate degrees.
11.04	Compare postsecondary training data for training programs of interest, such as total costs, average student loan debt, and median earnings and job placement rates after program completion.
12.0	Develop a personalized career and academic plan.
12.01	Prioritize an occupation, credential and postsecondary training provider for plan formation.
12.02	Self-assess progress toward meeting graduation requirements and skill-development goals.
12.03	Develop and complete a chronological checklist of steps and deadlines prior to postsecondary training or national service application that includes any required documentation to gather, writing prompts and examinations.
12.04	Identify a variety of financial aid opportunities, including scholarships, grants, savings, work, work-study programs, private loans and federal loans.
12.05	Develop a postsecondary training budget that is inclusive of living and school expenses.
Job Attainment	
13.0	Find, assess and apply to job opportunities.
13.01	Identify online job posts relevant to his or her career aspirations.
13.02	Compare and contrast the job posts’ required qualifications, job duties, compensation, benefits and employers.
13.03	Define what information, documentation and writing prompts are required for the positions.
14.0	Communicate personal competence, character and fit for a job opportunity.
14.01	Develop a resume.
14.02	Write a cover letter.
14.03	Curate a professional portfolio that includes work products.
14.04	Prepare for and experience a mock job interview.

15.0	Cultivate and leverage relationships to professionally advance.
	15.01 Request a signed reference letter, letter of recommendation and/or an online skill/professionalism endorsement.
	15.02 Develop a plan to cultivate a professional digital footprint.
	15.03 Develop a networking plan for a specific industry of interest.

Standards

After successfully completing this program, the student will be able to perform the following:

01.0 Demonstrate knowledge of the healthcare delivery system and health occupations.
02.0 Demonstrate the ability to communicate and use interpersonal skills effectively.
03.0 Demonstrate legal and ethical responsibilities.
04.0 Demonstrate an understanding of and apply wellness and disease concepts.
05.0 Recognize and practice safety and security procedures.
06.0 Recognize and respond to emergency situations.
07.0 Recognize and practice infection control procedures.
08.0 Demonstrate an understanding of information technology applications in healthcare.
09.0 Demonstrate employability skills.
10.0 Demonstrate knowledge of blood-borne diseases, including HIV/AIDS.
11.0 Apply basic math and science skills.
12.0 Practice professional pharmacy relational skills.
13.0 Identify medical and legal considerations in various pharmacy settings.
14.0 Perform clerical duties as related to Pharmacy Practice.
15.0 Demonstrate knowledge of medication safety and prevention of medication errors.
16.0 Demonstrate knowledge of inventory management.
17.0 Initiate measurement and calculating techniques as they relate to United States Pharmacopeia (USP) 795 (non-sterile) compounding in pharmacy practice.
18.0 Demonstrate basic knowledge and skills in areas of anatomy/ physiology, pharmacology, and drug classification relevant to pharmacy technicians.
19.0 Prepare and deliver medications.
20.0 Repackage unit-dose medications.
21.0 Prepare United States Pharmacopeia (USP) 797 and USP 800 sterile products.

Florida Department of Education
Student Performance Standards

Course Title: **Pharmacy Technician 1**
Course Number: **8418210**
Course Credit: **1**

Course Description:

Health Science Core: The Health Science Core is a core of basic knowledge necessary for any health occupations career. This health core is encompassed inside of this course. Students who complete this course do not have to repeat the Health Science Core at any level. Students must have completed or be concurrently enrolled in the course to move on in this program.

Emphasis is placed on communication and interpersonal skills, use of technology, ethics, and the development of critical thinking and problem-solving skills. Students may shadow professionals throughout the course.

CTE Standards and Benchmarks	
01.0	Demonstrate knowledge of the health care delivery system and health occupations. The student will be able to:
01.01	Identify the basic components of the health care delivery system, including public, private, government, and non-profit.
01.02	Identify common methods of payment for healthcare services.
01.03	Describe the various types of healthcare providers and the range of services available, including resources to victims of domestic violence.
01.04	Describe the composition and functions of a healthcare team.
01.05	Identify the general roles and responsibilities of the individual members of the healthcare team.
01.06	Identify the roles and responsibilities of the consumer within the healthcare delivery system.
01.07	Identify characteristics of effective teams.
01.08	Recognize methods for building positive team relationships.
01.09	Discuss attributes and attitudes of an effective leader.
01.10	Recognize factors and situations that may lead to conflict.
01.11	Recognize effective techniques for managing team conflict.
01.12	Describe factors that influence the current delivery system of healthcare.

CTE Standards and Benchmarks	
	01.13 Explain the impact of emerging issues, including technology, epidemiology, bioethics, and socioeconomics on healthcare delivery systems.
02.0	Demonstrate the ability to communicate and use interpersonal skills effectively. The student will be able to:
	02.01 Develop basic speaking and active listening skills.
	02.02 Develop basic observational skills and related documentation strategies in written and oral form.
	02.03 Identify characteristics of successful and unsuccessful communication, including communication styles and barriers.
	02.04 Identify characteristics of verbal and non-verbal cues.
	02.05 Use appropriate medical terminology and abbreviations.
	02.06 Discuss the importance of courtesy and respect for patients and other healthcare workers, and maintain good interpersonal relationships.
	02.07 Explain the importance of patient/client education regarding healthcare.
	02.08 Adapt communication skills to varied levels of understanding and cultural orientation, including diverse age, cultural, economic, ethnic, and religious groups.
	02.09 Discuss elements of communication using a sender-receiver model.
	02.10 Distinguish between and report subjective and objective information.
	02.11 Report relevant information in order of occurrence.
03.0	Demonstrate legal and ethical responsibilities. The student will be able to:
	03.01 Explain the legal framework of the healthcare occupations, including scope of practice legislation.
	03.02 Explain practices that could result in malpractice, liability, negligence, abandonment, false imprisonment, and fraud.
	03.03 Explain procedures for accurate documentation and record keeping.
	03.04 Explain the importance of healthcare facility policy and procedures for employees.
	03.05 Explain the “Patient’s Bill of Rights”.
	03.06 Identify and explain standards of the Health Insurance Portability and Accountability Act (HIPAA).
	03.07 Describe advance directives.

CTE Standards and Benchmarks	
	03.08 Describe informed consent.
	03.09 Explain the laws governing harassment, labor, and employment.
	03.10 Differentiate between legal and ethical issues in healthcare.
	03.11 Describe a code of ethics consistent with the healthcare occupation.
	03.12 Identify and compare personal, professional, and organizational ethics.
	03.13 Discuss the limits of authority and responsibility of health care workers, including legislated scope of practice
	03.14 Recognize and report illegal and/or unethical practices of healthcare workers.
	03.15 Recognize and report abuse, including domestic violence, neglect, and suspected human trafficking.
	03.16 Distinguish between the five schedules of controlled substances.
04.0	Demonstrate an understanding of and apply wellness and disease concepts. The student will be able to:
	04.01 Describe strategies for the prevention of diseases, including health screenings and examinations.
	04.02 Identify personal health practices and environmental factors that affect optimal function of each of the major body systems.
	04.03 Identify psychological reactions to illness, including defense mechanisms.
	04.04 Identify complementary and alternative health practices.
	04.05 Discuss the adverse effects of the use of alcohol, tobacco, and both legal and illegal drugs on the human body and apply safety practices related to these and other high-risk behaviors.
	04.06 Explain the basic concepts of positive self-image, wellness, and stress.
	04.07 Develop a wellness and stress control plan that can be used in personal and professional life.
	04.08 Explore and utilize the U.S. Department of Agriculture’s nutrition resources.
	04.09 Discuss the steps in the grief process.
05.0	Recognize and practice safety and security procedures. The student will be able to:
	05.01 Recognize safe and unsafe working conditions and report safety hazards.
	05.02 Explain why understanding how to safely use medical equipment is important.

CTE Standards and Benchmarks	
	05.03 Explain and apply the theory of root-cause analysis
	05.04 Identify and describe methods in medical error reduction and prevention in the various healthcare settings.
	05.05 Identify and practice security procedures for medical supplies and equipment.
	05.06 Explain personal safety procedures based on Occupational Safety and Health Administration (OSHA) and Centers for Disease Control (CDC) regulations (including standard precautions).
	05.07 Recognize Materials Data Safety Sheets (MSDS) and comply with safety signs, symbols, and labels.
	05.08 Explain proper body mechanics and ergonomics.
	05.09 Explain the procedure for properly identifying patients.
	05.10 Explain procedures for the safe transport and transfer of patients.
	05.11 Recognize fire, safety, disaster, and evacuations procedures.
	05.12 Discuss The Joint Commission patient safety goals (www.jointcommission.org) and any other applicable accrediting/regulatory agency guidelines.
06.0	Recognize and respond to emergency situations. The student will be able to:
	06.01 Monitor and record vital signs accurately.
	06.02 Describe legal parameters relating to the administration of emergency care.
	06.03 Obtain and maintain training for certification on cardiopulmonary resuscitation (CPR), automated external defibrillator (AED), foreign body airway obstruction (FBAO), and first aid.
	06.04 Recognize adverse drug-related emergencies and take appropriate first aid action.
07.0	Recognize and practice infection control procedures. The student will be able to:
	07.01 Define principles of infection control, including standard and transmission-based precautions.
	07.02 Explain medical asepsis and practice procedures such as hand-washing and isolation.
	07.03 Explain surgical asepsis.
	07.04 Describe how to dispose of biohazardous materials according to appropriate government guidelines, such as OSHA.
08.0	Demonstrate an understanding of information technology applications in healthcare. The student will be able to:

CTE Standards and Benchmarks	
	08.01 Describe technology applications in healthcare.
	08.02 Define terms and demonstrate basic computer skills.
	08.03 Recognize technology applications in healthcare.
	08.04 Interpret information from electronic medical documents.
	08.05 Identify methods of communication to access and distribute data, such as fax, e-mail, and internet.
09.0	Demonstrate employability skills. The student will be able to:
	09.01 Identify personal traits or attitudes desirable in a member of the healthcare team.
	09.02 Exemplify basic professional standards of healthcare workers as they apply to hygiene, dress, language, confidentiality, and behavior (i.e., telephone etiquette, courtesy, and self-introductions).
	09.03 Identify documents that may be required when applying for a job.
	09.04 Write an appropriate resume.
	09.05 Conduct a job search.
	09.06 Complete a job application form correctly.
	09.07 Examine levels of education, credentialing requirements, including licensure and certification, employment opportunities, workplace environments, and career growth potential.
	09.08 Identify acceptable work habits.
	09.09 Recognize appropriate affective/professional behavior.
	09.10 Compare careers within the health science career pathways (diagnostic services, therapeutic services, health informatics, support services, or biotechnology research and development).
10.0	Demonstrate knowledge of blood-borne diseases. The student will be able to:
	10.01 Recognize emerging diseases and disorders.
	10.02 Distinguish between fact and fallacy about the transmission and treatment of diseases caused by blood-borne pathogens.
	10.03 Identify community resources and services available to individuals with diseases caused by blood-borne pathogens.
	10.04 Identify "at-risk" behaviors which promote the spread of diseases caused by blood-borne pathogens and the public education necessary to combat the spread of these diseases.

CTE Standards and Benchmarks	
	10.05 Explain infection control techniques designed to prevent the spread of diseases caused by blood-borne pathogens to the care of all patients following the Centers for Disease Control (CDC) guidelines.
	10.06 Explain the legal aspects of HIV/AIDS, including testing.
11.0	Apply basic math and science skills. The student will be able to:
	11.01 Draw, read, and report on graphs, charts, and tables.
	11.02 Measure time, temperature, distance, capacity, and mass/weight.
	11.03 Make, use, and convert using both traditional and metric units.
	11.04 Make estimations and approximations and judge the reasonableness of the result.
	11.05 Convert from regular to 24-hour time.
	11.06 Demonstrate ability to evaluate and draw conclusions.
	11.07 Organize and communicate the results obtained by observation and experimentation.
	11.08 Ask appropriate scientific questions and recognize what is involved in experimental approaches to the solution of such questions.
	11.09 Calculate ratios.

Florida Department of Education
Student Performance Standards

Course Title: **Pharmacy Technician 2**
Course Number: **8418220**
Course Credit: **1**

Course Description:

This course builds on the knowledge and skill obtained in Pharmacy Technician 1. Students will learn integral administrative procedures, prevention of medication errors, and medical and legal considerations required of pharmacy technicians.

CTE Standards and Benchmarks	
12.0	Practice professional pharmacy relational skills. The student will be able to:
12.01	Explore the meaning, organizational flow, and duties of pharmacy personnel.
12.02	Identify pharmacy organizations and their role in the profession to include student membership opportunities.
12.03	Identify the current trends and perspectives in the pharmacy practice.
12.04	Describe how team building can facilitate change within the pharmacy working environment.
12.05	Understand the importance of good interpersonal skills/soft skills in various pharmacy settings.
12.06	Explain ethical conduct in job-related activities.
12.07	Identify State of Florida requirements for obtaining and maintaining pharmacy technician registration, as well as continuing education requirements for renewal.
12.08	Explore the importance of national certification and the continuing education requirements for renewal.
13.0	Identify medical and legal considerations in various pharmacy settings. The student will be able to:
13.01	Articulate the significance of current national and Florida law, medical legal concepts, and administrative rules as they relate to the scope of practice for the pharmacy technician.
13.02	Demonstrate an understanding of current vaccines and their guidelines.
13.03	Convey an understanding of patient counseling requirements pertaining to OBRA-90 versus Medication Therapy Management (MTM).
13.04	Explain the legal requirements for accurate pharmacy documentation and recordkeeping.
13.05	Demonstrate an understanding of HIPAA in pharmacy practice pertaining to the ethical and legal considerations.

CTE Standards and Benchmarks	
13.06	Convey an understanding of pertinent laws governing pharmacy practice, including but not limited to prescriptions, drug diversion, and use of E-FORCSE PDMP requirements.
13.07	Differentiate between controlled substance schedules (CI-CV) and their applicable regulations.
13.08	Convey an understanding of the Florida Right to Know Act with respect to P-listed drugs in addition to hazardous materials, the utilization of safety data sheets, and hazardous communication symbols.
13.09	Understand and explain activities that may be performed by pharmacy technicians and those that must be performed by licensed pharmacists, including final check.
13.10	Explain the importance of technology and its current use in various pharmacy settings.
13.11	Utilize emerging technologies such as AI to cross-reference reports with dispense/administration history to address unaccounted medications.
14.0	Perform clerical duties as related to Pharmacy Practice. The student will be able to:
14.01	Utilize pharmaceutical medical terminology.
14.02	Identify the major symbols and abbreviations used on prescriptions and state the meaning.
14.03	Utilize pharmacy reference manuals or websites.
14.04	Demonstrate retail pharmacy dispensing processes.
14.05	Utilize pharmacy software in processing pharmacy prescription data.
14.06	Identify and discuss applications of E-Prescribing and facsimile.
14.07	Utilize and apply interactive communication skills while gathering accurate information from patients and other healthcare professionals
14.08	Create, complete, and maintain patient profiles including third-party billing information.
14.09	Understand the processes of PBMs and third-party billing, resolving rejections, and obtaining prior authorizations.
14.10	Demonstrate professional communication skills within the scope of practice for the pharmacy technician.
14.11	Demonstrate knowledge of systems used in maintaining pharmacy records.
15.0	Demonstrate knowledge of medication safety and prevention of medication errors. The student will be able to:
15.01	Identify communication modalities that can result in the transmission of inaccurate information and explain specific ways to make improvements.
15.02	Convey an understanding of the patient’s Bill of Rights for medication administration as it relates to pharmacy practice.

CTE Standards and Benchmarks
15.03 Identify and explain appropriate patient safety goals by applicable accrediting and regulatory organizations.
15.04 Identify potential errors that may result in quality-related events (QRE) and explain specific ways they can be prevented.
15.05 Describe safety strategies used to prevent medication errors due to pharmaceutical abbreviations and terminology.
15.06 Summarize, evaluate, and describe the technician's role in quality assurance activities related to various pharmacy practices.

Florida Department of Education
Student Performance Standards

Course Title: **Pharmacy Technician 3**
Course Number: **8418230**
Course Credit: **1**

Course Description:

This course builds on the knowledge and skills obtained in Pharmacy Technician 1 and 2. This course focuses on the importance of quality control when handling controlled substances and essential compounding techniques.

CTE Standards and Benchmarks	
16.0	Demonstrate knowledge of inventory management. The student will be able to:
16.01	Convey an understanding of industry standards in purchasing pharmaceutical supplies.
16.02	Demonstrate how to maintain a controlled substance inventory.
16.03 16.04 16.05	Understand pharmacy business math in prescription pricing systems.
16.06	Maintain stock inventory, communicate shortages, and seek solutions to maintain continuity of patient care.
16.07	Understand the process of how to create electronic purchase orders.
16.08	Accurately perform the process of purchasing, receiving, special handling, storing, distributing, and disposing of pharmaceutical supplies.
16.09	Convey an understanding of recall management and know the differences between types of recalls and how to address them.
16.10	Convey an understanding of the inventory control process implemented by Title II of the Drug Quality and Security Act.
17.0	Initiate measurement and calculating techniques as they relate to United States Pharmacopeia (USP) 795 (non-sterile) compounding in pharmacy practice. The student will be able to:
17.01	Convey an understanding of United States Pharmacopeia (USP) 795 standards.
17.02	Convert measurements within the apothecary, avoirdupois, household, and metric systems.
17.03	Perform common pharmaceutical calculations.
17.04	Identify and utilize common pharmaceutical weighing equipment.

CTE Standards and Benchmarks	
17.05	Identify and utilize common pharmaceutical volume measurement equipment.
17.06	Accurately demonstrate the technique of preparing common non-sterile pharmaceutical compounds.
17.07	Summarize, evaluate, and describe the technician's role in quality assurance activities as related to the preparation of non-sterile products.

Florida Department of Education
Student Performance Standards

Course Title: **Pharmacy Technician 4**
Course Number: **8418240**
Course Credit: **1**

Course Description:

This course builds on the knowledge and skills obtained in Pharmacy Technician 1, 2, and 3. This course focuses on anatomy and physiology and the application of pharmacology for disease management.

CTE Standards and Benchmarks	
18.0	Demonstrate basic knowledge and skills in areas of anatomy/ physiology, pharmacology, and drug classification relevant to pharmacy technicians. The student will be able to:
18.01	Evaluate and apply anatomical terminology to describe the location of parts or areas of the body and related disease processes.
18.02	Define the major classifications of pharmaceuticals and conditions treated.
18.03	Demonstrate knowledge of trade and generic name equivalents.
18.04	Evaluate the pharmacy technician's understanding of pharmacology, including drug classifications, mechanisms of action, common side effects, and interactions.
18.05	Identify at least one official compendium of standards for quality and purity of drug monographs.
18.06	Convey an understanding of Investigational Drugs, Risk Evaluation and Mitigation Strategies (REMS), off-label indications, and emerging drug therapy.
18.07	Demonstrate an understanding of common adult doses of medications, duration of common drug therapies, and respective contraindications, including the BEERS Criteria.
18.08	Identify potential interactions that require a pharmacist's intervention pertaining to food/alcohol, herbal, OTC, and/or prescription medications.
18.09	Identify allergy histories during the medication reconciliation process and discern "allergy" vs "side effect" in optimizing care.

Florida Department of Education
Student Performance Standards

Course Title: **Pharmacy Technician 5**
Course Number: **8418250**
Course Credit: **1**

Course Description:

This course builds on the knowledge and skills obtained in Pharmacy Technician 1, 2, 3, and 4.

Clinical (externship) per programmatic needs in the hospital/retail setting will expand the student's knowledge of science and medicine as it relates to the professions associated with the practice in a pharmacy setting. Students will interact with pharmacists and technicians and patients to provide services in all types of patient care settings, including inpatient, outpatient, and ambulatory care. This externship is designed to develop both professional and clinical skills to ensure success in the pharmacy field.

Students are expected to participate in a clinical pharmacy experience that provides opportunities for each student to build on acquired knowledge and skills, to practice and develop skills in selected procedures. Such procedures include, but are not limited to, dispensing, compounding, inventory handling and control, drug distribution, processing of third-party claims, maintenance of patient profiles and interaction and communication with pharmacy staff.

CTE Standards and Benchmarks	
19.0	Prepare and deliver medications. The student will be able to:
19.01	Read and prepare medication orders correctly.
19.02	Demonstrate institutional pharmacy dispensing processes.
19.03	Compare all new orders with medications listed on profiles while noting any changes.
19.04	Utilize special precautions in the preparation of medications for pediatric patients.
19.05	Explain how to safely transport medications, being aware of hazards, theft, legal implications of accidental loss, and other consequences.
19.06	Understand how to correctly fill and deliver medication.
19.07	Collect data from the medication administration record.
19.08	Describe the use of automated medication dispensing equipment.
20.0	Repackage unit-dose medications. The student will be able to:

CTE Standards and Benchmarks
20.01 Locate the correct stock container.
20.02 Describe the use of unit-dose packaging equipment.
20.03 Measure, count, and place the individual dose in appropriate containers.
20.04 Understand precautions used when packaging unit-dose hazardous drugs.
20.05 Record repackaged medication data correctly.
20.06 Summarize, evaluate, and describe the technician's role in quality assurance activities related to repackaging unit-dose medication.

Florida Department of Education
Student Performance Standards

Course Title: **Pharmacy Technician 6**
Course Number: **8418260**
Course Credit: **1**

Course Description:

This course builds on the knowledge and skills obtained in Pharmacy Technician 1, 2, 3, 4, and 5. Students will learn how to properly prepare sterile products for patients and apply detailed knowledge of quality control techniques, drug incompatibilities, and the storage and disposal of pharmaceutical products.

CTE Standards and Benchmarks	
21.0	Prepare United States Pharmacopeia (USP) 797 and USP 800 sterile products. The student will be able to:
21.01	Convey an understanding of United States Pharmacopeia (USP) 797 regulations.
21.02	Convey an understanding of United States Pharmacopeia (USP) 800 regulations.
21.03	Compare the medication order with the label on the vial and check the expiration date of the product.
21.04	Calculate drug dosage for parenteral use.
21.05	Reconstitute parenteral medications.
21.06	Demonstrate aseptic technique to withdraw medication from stock vial, measure correct quantity as instructed, select and insert it into IV solution without error.
21.07	Demonstrate aseptic technique to withdraw medication from an ampule using a filter needle/straw.
21.08	Prepare parenteral solutions using proper aseptic technique.
21.09	Understand the preparation of Total Parenteral Nutrition (TPN) solutions.
21.10	Understand the preparation of chemotherapeutic agents using proper safety techniques.
21.11	Understand the appropriate technique while using specialized equipment such as laminar flow hoods, filters, pumps, automated compounders, and barrier isolators.
21.12	Place label on IV solution container and record appropriately.
21.13	Perform a quality control check of the completed product.

CTE Standards and Benchmarks
21.14 Convey an understanding of the proper storage and disposal requirements of reconstituted and non-reconstituted IV solutions.
21.15 Convey an understanding of the proper storage and disposal of hazardous drugs.
21.16 Summarize, evaluate, and describe the technician's role in quality assurance activities related to the preparation of sterile products.
21.17 Understand the concept of Diversion Surveillance to assist in recognizing controlled substances.

Florida Department of Education
Student Performance Standards

Course Title: **Pharmacy Technician 7**
Course Number: **8418270**
Course Credit: **1**

Course Description:

This course builds on the knowledge and skills obtained in Pharmacy Technician 1, 2, 3, 4, 5, and 6, provides certification preparation, and completion of a capstone project.

Clinical (externship) per programmatic needs in the hospital/retail setting will expand the student's knowledge of science and medicine as it relates to the professions associated with the practice in a pharmacy setting. Students will interact with pharmacists and technicians and patients to provide services in all types of patient care settings, including inpatient, outpatient, and ambulatory care. This externship is designed to develop both professional and clinical skills to ensure success in the pharmacy field.

Students are expected to participate in a clinical pharmacy experience that provides opportunities for each student to build on acquired knowledge and skills, to practice and develop skills in selected procedures. Such procedures include, but are not limited to, dispensing, compounding, inventory handling and control, drug distribution, processing of third-party claims, maintenance of patient profiles, and interaction and communication with pharmacy staff.

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as experimental, quality, and safety procedures, are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate, and troubleshoot equipment/tools used to make observations. Students understand measurement error and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

Clinical practicum experiences are an integral part of this program.

In addition, due to the clinical experiences students are engaged in through the program and to ensure the safety of both the students and the patients the recommended student to instructor ratio in the classroom is 20:1 and in the lab is 4:1.

Florida Standards for English Language Development (ELD)

English language learners communicate for social and instructional purposes within the school setting. ELD.K12.ELL.SI.1

English Language Development (ELD) Standards Special Notes:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. For additional information on the development and implementation of the ELD standards, please contact the Bureau of Student Achievement through Language Acquisition at sala@fldoe.org .

Special Notes

This program meets the Department of Health's education requirements for HIV/AIDS, Domestic Violence and Prevention of Medical Errors. Although not a requirement for initial licensure, it is a requirement for renewal, therefore the instructor **may** provide a certificate for renewal purposes to the student verifying these requirements have been met.

If students in this program are seeking a licensure, certificate or registration through the Department of Health, please refer to 456.0635, F.S. for more information on disqualification for a license, certificate, or registration through the Department of Health.

It is recommended that program completers take a national certification examination upon successful program completion.

Outcomes 01-11 are referred to as the Health Science Core and do not have to be completed if the student has previously completed the Core in another health occupations program at any level.

Career and Technical Student Organization (CTSO)

CTSOs are co-curricular career and technical student organizations providing leadership training and reinforcing specific career and technical skills. Career and Technical Student Organizations provide activities for students as an integral part of the instruction offered. Other CTSOs not listed in this curriculum framework or recognized by the Florida Department of Education are permissible provided they support student mastery over the standards and benchmarks of this curriculum framework.

Cooperative Training – OJT

On-the-job training is appropriate but not required for this program. Whenever offered, the rules, guidelines, and requirements specified in the OJT framework apply.

Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities as identified on the secondary student's Individual Educational Plan (IEP) or 504 plan or postsecondary student's accommodations plan to meet individual needs and ensure equal access. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

In addition to accommodations, some secondary students with disabilities (students with an IEP served in Exceptional Student Education (ESE)) will need modifications to meet their needs. Modifications change the outcomes or what the student is expected to learn, e.g., modifying the curriculum of a secondary career and technical education course. Note: postsecondary curriculum and regulated secondary programs cannot be modified.

Some secondary students with disabilities (ESE) may need additional time (i.e., longer than the regular school year) to master the student performance standards associated with a regular course or a modified course. If needed, a student may enroll in the same career and technical course more than once. Documentation should be included in the IEP that clearly indicates that it is anticipated that the student may need an additional year to complete a Career and Technical Education (CTE) course. The student should work on different competencies and new applications of competencies each year toward completion of the CTE course. After achieving the competencies identified for the year, the student earns credit for the course. It is important to ensure that credits earned by students are reported accurately. The district's information system must be designed to accept multiple credits for the same course number for eligible students with disabilities.

Florida Department of Education
Curriculum Framework

The standards and benchmarks for this program were updated for the 2026-27 academic year.

Program Title: **Practical Nursing**
Program Type: **Career Preparatory**
Career Cluster: **Health Science**

Secondary – Career Preparatory	
Program Number	8418400
CIP Number	0351390102
Grade Level	9-12
Program Length	9 Credits
Teacher Certification	Refer to the **Program Structure** section.
CTSO	HOSA, Skills USA
SOC Code(s) (all applicable)	29-2061 -- Licensed Practical and Licensed Vocational Nurses
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml

Purpose

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Health Science career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, occupation-specific skills, and knowledge of all aspects of the Health Science career cluster.

The content includes, but is not limited to theoretical instruction and clinical experience in medical, surgical, obstetric, pediatric, and geriatric nursing; theoretical instruction and clinical experience in acute, care, long term care and community settings; theoretical instruction and clinical application of vocational role and function; personal, family and community health concepts; nutrition; human growth and development over the life span; body structure and function; interpersonal relationship skills, mental health concepts; pharmacology and administration of medications; legal aspects of practice; and current issues in nursing.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Program Structure

This program is a planned sequence of instruction consisting of totaling nine credits.

To teach the course(s) listed below, instructors must hold at least one of the teacher certifications indicated for that course.

The following table illustrates the secondary program structure:

Course Number	Course Title	Teacher Certification	Length	SOC Code	Level	Graduation Requirement
8418410	Practical Nursing Foundations 1A	REG NURSE 7 G PRAC NURSE @7 (Must be a Registered Nurse)	1 Credit	29-2061	3	CT
8418420	Practical Nursing Foundations 1B		1 Credit	29-2061	3	CT
8418430	Practical Nursing Foundations 2A		1 Credit	29-2061	3	CT
8418440	Practical Nursing Foundations 2B		1 Credit	29-2061	3	CT
8418450	Practical Nursing Medical Surgical 1A		1 Credit	29-2061	3	CT
8418460	Practical Nursing Medical Surgical 1B		1 Credit	29-2061	3	CT
8418470	Practical Nursing Medical Surgical 2A		1 Credit	29-2061	3	CT
8418480	Practical Nursing Medical Surgical 2B		1 Credit	29-2061	3	CT
8418490	Practical Nursing Transition to Practice		1 Credit	29-2061	3	CT

(Graduation Requirement Codes: CT= Career & Technical Education, EQ= Equally Rigorous Science, EC= Economics, MA= Mathematics, PL= Personal Financial Literacy)

National Standards (NS)

Students are eligible to apply to take the national licensing examination after satisfactory completion of an approved program. The National Council Licensure Examination for Practical Nurses, NCLEX-PN is a computer-adaptive examination that the nursing graduate must take and pass in order to practice as a Licensed Practical Nurse.

Programs identified as having Industry or National Standards have been cross-walked with the corresponding standards and/or benchmarks. Industry or National Standards for the Practical Nursing program can be found using the following link: https://www.ncsbn.org/publications/2023-nclex-pn-test-plan and https://www.ncsbn.org/exams-research/report-of-findings-from-the-2021-lpnvn-nursing-knowledge-survey

Regulated Programs

The Practical Nursing Program must comply with the Florida Board of Nursing rules, including faculty qualifications. For questions regarding this process, please contact: Florida Board of Nursing, 4052 Bald Cypress Way, Tallahassee, FL 32399-3752.

Human Trafficking Course – SB 340 NCLEX Requirement – Effective July 1, 2027

Graduates of Florida-approved **Practical Nursing (LPN) and Registered Nursing (RN) programs** applying for initial Florida licensure by examination must complete a **two-hour Human Trafficking course after graduation and prior to taking the NCLEX**, as required by **s. 464.008(1)(e), F.S.**

The course must contain the content required for the Human Trafficking continuing education course pursuant to **s. 464.013(3)(c), F.S.**

Human Trafficking Course Requirements and Resources: Official Florida Board of Nursing – RN Continuing Education

This course is currently identified by the course provider as a two-hour Florida Human Trafficking course that meets the content standard for initial licensure under **s. 464.008, F.S., as amended by SB 340**, and the requirements of **s. 464.013(3)(c), F.S.** The course is offered online and provides a certificate of completion. Because students completing the course prior to initial licensure may not yet have a Florida nursing license or an active CE Broker account, each student is responsible for **downloading, retaining, and safeguarding the certificate of completion** as documentation of course completion

Implementation: Nursing programs should notify students prior to graduation that the two-hour Human Trafficking course is a **post-graduation, pre-NCLEX requirement**. Graduates should complete the course, retain documentation of successful completion, and follow the current Florida Board of Nursing and Florida Department of Health requirements for verification and NCLEX eligibility.
Statutory Authority: Section 464.008(1)(e), Florida Statutes; Section 464.013(3)(c), Florida Statutes; CS/SB 340 (2026), Chapter 2026-82.

Clinical instruction of nursing students will meet the requirements of 464.019, F.S. Clinical experience must make up at least 50% of the total program. Simulated practice and clinical experiences are included as an integral part of this program. **Clinical Simulation may be used for no more than 50% of the total clinical experience.**

Florida's Career Readiness Skills for CTE Programs

Employability Skills	
01.0	Apply academic skills to workplace scenarios.
01.01	Use reading skills.
01.02	Use writing skills.
01.03	Use mathematical strategies and procedures.
01.04	Use scientific principles and procedures.
02.0	Design a solution to an industry problem.
02.01	Use critical thinking.
02.02	Use creativity.
02.03	Make sound decisions.
02.04	Solve problems.
02.05	Reason.
02.06	Plan and organize.
03.0	Manage resources within an industry project
03.01	Manage time.
03.02	Manage money or resources.
03.03	Manage materials.
03.04	Manage personnel.
04.0	Oversee the subcomponents, operations and output of a technical or organizational system.
04.01	Manage systems.
04.02	Monitor systems.
04.03	Improve systems.
05.0	Use information for decision making.
05.01	Locate information.
05.02	Organize information.
05.03	Use information.

	05.04 Analyze information.
	05.05 Communicate information.
06.0	Apply relevant technology to workplace scenarios to aid productivity.
	06.01 Use technology.
07.0	Interpret and express interpersonal communication.
	07.01 Communicate verbally.
	07.02 Listen actively.
	07.03 Comprehend written material.
	07.04 Convey information in writing.
	07.05 Communicate nonverbally.
	07.06 Interpret nonverbal communication.
08.0	Interact with others to accomplish workplace goals.
	08.01 Collaborate with others in a team.
	08.02 Respond to customer needs.
	08.03 Exercise leadership.
	08.04 Negotiate to resolve conflict.
	08.05 Respect others.
09.0	Manage personal behavior to maximize productivity and professional growth.
	09.01 Demonstrate responsibility and self-discipline.
	09.02 Adapt and show flexibility.
	09.03 Work independently.
	09.04 Demonstrate a willingness to learn.
	09.05 Demonstrate integrity.
	09.06 Demonstrate professionalism.
	09.07 Take initiative.
	09.08 Display positive attitude.
	09.09 Take responsibility for professional growth.

Career Exploration & Planning	
10.0	Explain career opportunities aligned with the regional economy and personal aspirations.
10.01	Describe regional occupations that are high-demand, high-growth, high-wage and/or high-skill.
10.02	Describe careers aligned with his or her interests, skills and values based on career assessment, experiential learning, career informational interviews, research and/or reflection.
11.0	Explain postsecondary pathways aligned with his or her career aspirations.
11.01	Compare and contrast postsecondary pathways, including education, employment, entrepreneurship and enlistment (the “Four Es”).
11.02	Compare and contrast regional postsecondary training provider options, including apprenticeships, technical colleges, state colleges, universities and industry-recognized certification providers.
11.03	Define postsecondary credentialing and stacking options, including industry-recognized certifications, apprenticeship certificates of completion, career certificates, licenses and associate or baccalaureate degrees.
11.04	Compare postsecondary training data for training programs of interest, such as total costs, average student loan debt, and median earnings and job placement rates after program completion.
12.0	Develop a personalized career and academic plan.
12.01	Prioritize an occupation, credential and postsecondary training provider for plan formation.
12.02	Self-assess progress toward meeting graduation requirements and skill-development goals.
12.03	Develop and complete a chronological checklist of steps and deadlines prior to postsecondary training or national service application that includes any required documentation to gather, writing prompts and examinations.
12.04	Identify a variety of financial aid opportunities, including scholarships, grants, savings, work, work-study programs, private loans and federal loans.
12.05	Develop a postsecondary training budget that is inclusive of living and school expenses.
Job Attainment	
13.0	Find, assess and apply to job opportunities.
13.01	Identify online job posts relevant to his or her career aspirations.
13.02	Compare and contrast the job posts’ required qualifications, job duties, compensation, benefits and employers.
13.03	Define what information, documentation and writing prompts are required for the positions.
14.0	Communicate personal competence, character and fit for a job opportunity.
14.01	Develop a resume.
14.02	Write a cover letter.
14.03	Curate a professional portfolio that includes work products.
14.04	Prepare for and experience a mock job interview.

15.0	Cultivate and leverage relationships to professionally advance.
	15.01 Request a signed reference letter, letter of recommendation and/or an online skill/professionalism endorsement.
	15.02 Develop a plan to cultivate a professional digital footprint.
	15.03 Develop a networking plan for a specific industry of interest.

Standards

After successfully completing this program, the student will be able to perform the following:

01.0 Integrated Processes – Apply the following fundamental integrated processes to the practice of practical nursing and integrate them throughout the Client Needs categories and subcategories in every course of the program **(See Client Needs categories from NCSBN, 2023). This standard is part of EVERY course in the Practical Nursing program.**
02.0 Demonstrate the ability to participate in teamwork and collaboration, using appropriate written and verbal therapeutic communication, interpersonal skills, and standard nursing terminology (Coordinated Care, Health Promotion and Maintenance).
03.0 Demonstrate the ability to participate in teamwork and collaboration, using organizational functions, the plan of care, computer literacy, and electronic health record use (Coordinated Care, Health Promotion and Maintenance).
04.0 Demonstrate legal and ethical aspects of practice and responsibilities specific to the nursing profession. (Coordinated Care).
05.0 Recognize and practice safety and security procedures, including environmental safety, client safety, and healthcare worker safety (Coordinated Care, Safety and Infection Control, Physiological Adaptation).
06.0 Recognize and practice infection control principles and procedures and demonstrate maintenance of aseptic technique (Coordinated Care, Safety and Infection Control, Physiological Adaptation).
07.0 Perform client and personal care (Safety and Infection Control, Basic Care and Comfort, Reduction of Risk Potential).
08.0 Select clinical judgment functions in geriatric care (Psychosocial Integrity).
09.0 Explain foundational and evidence-based practice thinking that supports practical nursing care, describing the body structure and function of the healthy human body, including but not limited to the following body systems (Coordinated Care, Health Promotion and Maintenance)**.**
10.0 Explain foundational thinking that supports human growth and development across the lifespan (Coordinated Care, Health Promotion and Maintenance).
11.0 Develop teamwork and collaboration through clinical judgment, the nursing process, clinical reasoning, critical thinking, the use of SBAR (situation, background, assessment, recommendation), and the nursing care plan (Coordinated Care).
12.0 Demonstrate nursing knowledge, skills, attitudes (KSAs), procedures, and the following skills (Coordinated Care, Safety and Infection Control, Health Promotion and Maintenance, Pharmacological Therapies, Reduction of Risk Potential, Physiological Adaptation).
13.0 Demonstrate the use of clinical judgment to provide competent psychiatric or mental health care that includes the following diseases and disorders: schizophrenia, mood disorders, personality disorders, anxiety disorders, substance abuse, substance use disorders, impulse control disorders, eating disorders, and neurodevelopmental disorders (Psychosocial Integrity).
14.0 Demonstrate nursing knowledge, skills, attitudes (KSAs), and procedures related to safe administration of medication that include the following skills (Coordinated Care, Safety and Infection Control, Health Promotion and Maintenance, Pharmacological Therapies, Reduction of Risk Potential, Physiological Adaptation).
15.0 Interpret evidence-based practice to provide health awareness in community settings (Reduction of Risk Potential).
16.0 Demonstrate the use of clinical judgment to care for pre-operative and post-operative clients (Reduction of Risk Potential, Physiological Adaptation).
17.0 Demonstrate the use of clinical judgment to care for a medical surgical client (MS1: cardiovascular/circulatory, respiratory, lymphatic/immune, musculoskeletal, endocrine, integumentary/sensory systems. (Reduction of Risk Potential, Physiological Adaptation).
18.0 Demonstrate the use of clinical judgment to care for a medical surgical client (MS2: gastrointestinal, neurological, urinary, reproductive, oncologic). (Reduction of Risk Potential, Physiological Adaptation).

19.0 Demonstrate the use of clinical judgment to care for an obstetric or maternal/newborn client needing intrapartum care (Health Promotion and Maintenance, Reduction of Risk Potential, Physiological Adaptation, Coordinated Care).
20.0 Demonstrate the use of clinical judgment to care for a pediatric client with the following diseases or disorders, including SIDS/SUIDS (Health Promotion and Maintenance, Reduction of Risk Potential, Physiological Adaptation, Coordinated Care).
21.0 Demonstrate the use of evidence-based practice and readiness for safe transition to nursing practice.

After completion of the Practical Nursing program, the graduate practical nurse may take the 30-hour Intravenous Therapy Course, consisting of the following standard:

22.0 Demonstrate nursing knowledge, skills, attitudes (KSAs), and procedures related to safe intravenous access and intravenous medication administration that include the following skills.

Florida Department of Education
Student Performance Standards

Course Title: **Practical Nursing Foundations 1A**
Course Number: **8418410**
Course Credit: **1**

Course Description:

The objectives in the course include knowledge of the health care system and professions, safety, security and emergency procedures, HIV/AIDS, computer literacy, basic communication skills, legal and ethical nursing concepts, principles of infection control and aseptic technique.

CTE Standards and Benchmarks	
01.0	Integrated Processes – Apply the following fundamental integrated processes to the practice of practical nursing and integrate them throughout the Client Needs categories and subcategories in every course of the program **(See Client Needs categories from NCSBN, 2023). This standard is part of EVERY course in the Practical Nursing program.** The student will be able to show:
01.01	Caring – Interaction of the practical nurse and client in an atmosphere of mutual respect and trust. In this collaborative environment, the practical nurse provides support and compassion to help achieve desired therapeutic outcomes.
01.02	Clinical judgment – The observed outcome of critical thinking and decision-making. It is an iterative process that uses nursing knowledge to observe and assess presenting situations, identify a prioritized client concern, and generate the best possible evidence-based solutions in order to deliver safe client care. The six clinical judgment functions include: recognizing cues, analyzing cues, prioritizing and hypothesizing, generating solutions, taking action, and evaluating outcomes.
01.03	Client problem-solving process (nursing process) – A scientific approach to client care that includes data collection, planning, implementation, and evaluation.
01.04	Communication and documentation – Verbal and nonverbal interactions between the practical nurse and the client, as well as other members of the healthcare team. Events and activities associated with client care are validated in written and/or electronic records that reflect standards of practice and accountability in the provision of care.
01.05	Culture and spirituality – Interaction of the nurse and the client (individual, family or group, including significant others, and population) that recognizes and considers the client-reported, self-identified, unique and individual preferences to client care, the applicable standard of care, and legal considerations.
01.06	Teaching and learning – Facilitation of the acquisition of knowledge, skills, and attitudes (KSAs) to assist in promoting a change in behavior.
01.07	Professionalism, respect, and civility toward clients and colleagues in all educational and practice settings
01.08	Application of a self-care plan, including the demonstration of healthy lifestyle choices and personal health maintenance
01.09	A demonstration of nursing care in clinical experiences, simulation, or skills lab of at least ___ hours.
02.0	Demonstrate the ability to participate in teamwork and collaboration, using appropriate written and verbal therapeutic communication, interpersonal skills, and standard nursing terminology (Coordinated Care, Health Promotion and Maintenance). The student will be able to:

CTE Standards and Benchmarks	
	02.01 Describe teamwork and collaboration through the healthcare system and healthcare occupations.
	02.02 Participate as a member of an interdisciplinary team.
	02.03 Monitor activities of assistive personnel.
	02.04 Recognize and report staff conflict.
	02.05 Participate in staff education (in-services, continued competency).
	02.06 Follow up with the client after discharge.
	02.07 Participate in the client discharge or transfer.
	02.08 Participate in the client referral process.
	02.09 Provide and receive reports.
	02.10 Recognize self-limitations of tasks/assignments and seek assistance when needed.
	02.11 Participate in a quality improvement (QI) activity (collecting data, serving on QI committee).
	02.12 Identify barriers to communication.
	02.13 Identify barriers to learning.
03.0	Demonstrate the ability to participate in teamwork and collaboration, using organizational functions, the plan of care, computer literacy, and electronic health record use (Coordinated Care, Health Promotion and Maintenance). The student will be able to:
	03.01 Contribute to the development of and/or update the client plan of care.
	03.02 Participate in providing cost-effective care.
	03.03 Use information technology in client care.
	03.04 Verify and process healthcare orders.
04.0	Demonstrate legal and ethical aspects of practice and responsibilities specific to the nursing profession (Coordinated Care). The student will be able to:
	04.01 Provide information about advance directives.
	04.02 Advocate for client rights and needs (including but not limited to domestic violence, human trafficking).
	04.03 Promote client self-advocacy.

CTE Standards and Benchmarks	
	04.04 Assign client care and/or related tasks (unlicensed assistive personnel; LPN).
	04.05 Involve the client in care decision making.
	04.06 Maintain client confidentiality.
	04.07 Provide for privacy needs.
	04.08 Practice in a manner consistent with the code of ethics for nurses.
	04.09 Respond to the unsafe practice of a healthcare provider (intervene, report).
	04.10 Participate in the client consent process.
	04.11 Follow regulations/policies for reporting specific issues (abuse, neglect, gunshot wound, communicable disease).
	04.12 Provide care within the legal scope of practice (including but not limited to nursing laws and rules for Florida, and recognizing impairment in the workplace).
05.0	Recognize and practice safety and security procedures, including environmental safety, client safety, and healthcare worker safety (Coordinated Care, Safety and Infection Control, Physiological Adaptation). The student will be able to:
	05.01 Identify client allergies and intervene as appropriate.
	05.02 Verify the identity of the client.
	05.03 Assist in and/or reinforce education to the client about safety precautions.
	05.04 Use safe client handling techniques (body mechanics).
	05.05 Identify and address unsafe conditions in healthcare and home environments.
	05.06 Follow protocol for timed client monitoring (safety checks).
	05.07 Implement the least restrictive restraints or seclusion.
	05.08 Acknowledge and document practice errors (incident or safety report).
	05.09 Assure the availability and safe functioning of client care equipment.
	05.10 Initiate and participate in security alerts (infant abduction, flight risk).
	05.11 Participate in preparation for internal and external disasters (fire, natural disaster, active shooter, evacuation).
	05.12 Respond and intervene in a client life-threatening situation (cardiopulmonary resuscitation).

CTE Standards and Benchmarks	
06.0	Recognize and practice infection control principles and procedures and demonstrate maintenance of aseptic technique (Coordinated Care, Safety and Infection Control, Physiological Adaptation). The student will be able to:
06.01	Apply principles of infection control (PPE, aseptic technique, isolation, standard precautions).
06.02	Explain the OSHA bloodborne pathogen standard.
06.03	Outline HIV/AIDS awareness and resources.

Florida Department of Education
Student Performance Standards

Course Title: **Practical Nursing Foundations 1B**
Course Number: **8418420**
Course Credit: **1**

Course Description:

This course is a continuation of Practical Nursing Foundations 1A. The objectives in the course include basic nursing care procedures, geriatric care, restorative activities, organizational functions, structure and function of the body system across the lifespan and nutrition. Laboratory and clinical experiences are an integral part of this course.

CTE Standards and Benchmarks	
01.0	Integrated Processes – Apply the following fundamental integrated processes to the practice of practical nursing and integrate them throughout the Client Needs categories and subcategories in every course of the program **(See Client Needs categories from NCSBN, 2023). This standard is part of EVERY course in the Practical Nursing program.** The student will be able to show:
01.01	Caring – Interaction of the practical nurse and client in an atmosphere of mutual respect and trust. In this collaborative environment, the practical nurse provides support and compassion to help achieve desired therapeutic outcomes.
01.02	Clinical judgment – The observed outcome of critical thinking and decision-making. It is an iterative process that uses nursing knowledge to observe and assess presenting situations, identify a prioritized client concern, and generate the best possible evidence-based solutions in order to deliver safe client care. The six clinical judgment functions include: recognizing cues, analyzing cues, prioritizing and hypothesizing, generating solutions, taking action, and evaluating outcomes.
01.03	Client problem-solving process (nursing process) – A scientific approach to client care that includes data collection, planning, implementation, and evaluation.
01.04	Communication and documentation – Verbal and nonverbal interactions between the practical nurse and the client, as well as other members of the healthcare team. Events and activities associated with client care are validated in written and/or electronic records that reflect standards of practice and accountability in the provision of care.
01.05	Culture and spirituality – Interaction of the nurse and the client (individual, family or group, including significant others, and population) that recognizes and considers the client-reported, self-identified, unique and individual preferences to client care, the applicable standard of care, and legal considerations.
01.06	Teaching and learning – Facilitation of the acquisition of knowledge, skills, and attitudes (KSAs) to assist in promoting a change in behavior.
01.07	Professionalism, respect, and civility toward clients and colleagues in all educational and practice settings.
01.08	Application of a self-care plan, including the demonstration of healthy lifestyle choices and personal health maintenance.
01.09	A demonstration of nursing care in clinical experiences, simulation, or skills lab of at least ___ hours.
07.0	Perform client and personal care (Safety and Infection Control, Basic Care and Comfort, Reduction of Risk Potential). The student will be able to:

CTE Standards and Benchmarks	
07.01	Use transfer assistive devices (gait belt, slide board, mechanical lift).
07.02	Provide care to a client with bowel or bladder management protocol.
07.03	Provide for mobility needs (ambulation, range of motion, transfer, repositioning, use of adaptive equipment).
07.04	Use measures to maintain or improve client skin integrity.
07.05	Provide care to an immobilized client based on need.
07.06	Assist in the care and comfort for a client with a visual and/or hearing impairment (body functions, immobility).
07.07	Promote alternative/complementary therapy in providing client care (music therapy, pet therapy).
07.08	Provide non-pharmacological measures for pain relief (imagery, massage, repositioning).
07.09	Evaluate pain using standardized rating scales.
07.10	Monitor client intake and output.
07.11	Assist with activities of daily living (including but not limited to bed mobility, transfer, ambulation, mobility, dressing, eating, elimination, personal hygiene, and grooming).
07.12	Monitor and provide for nutritional needs of the client (including therapeutic diets, cultural and religious food preferences, nutrients, sources, and healthcare significance).
07.13	Assist in providing postmortem care.
07.14	Provide measures to promote sleep and rest.
07.15	Apply and check proper use of compression stockings and/or sequential compression devices (SCDs).
07.16	Identify the client at risk and implement interventions.
07.17	Check and monitor vital signs (including oxygen saturation).
08.0	Select clinical judgment functions in geriatric care (Psychosocial Integrity). The student will be able to:
08.01	Assist in the care of the cognitively impaired client (including Alzheimer's, dementia, and other neurocognitive care).
08.02	Participate in reminiscence therapy, validation therapy, or reality orientation.
08.03	Report concerns to the nurse related to elder abuse, neglect, and maltreatment.
08.04	Initiate and participate in security alerts (flight risk).

CTE Standards and Benchmarks	
	08.05 Provide end-of-life, palliative, and hospice care and education to clients.
09.0	Explain foundational and evidence-based practice thinking that supports practical nursing care, describing the body structure and function of the healthy human body, including but not limited to the following body systems (Coordinated Care, Health Promotion and Maintenance). The student will be able to:
	09.01 Describe and introduce body structure and function.
	09.02 Describe the structure and function of tissues and cells.
	09.03 Describe the structure and function of the integumentary system.
	09.04 Describe the structure and function of the nervous system.
	09.05 Describe the structure and function of the sensory system.
	09.06 Describe the structure and function of the skeletal system.
	09.07 Describe the structure and function of the muscular system.
	09.08 Describe the structure and function of the endocrine system.
	09.09 Describe the structure and function of the cardiovascular system.
	09.10 Describe the structure and function of the hematologic system.
	09.11 Describe the structure and function of the respiratory system.
	09.12 Describe the structure and function of the digestive system.
	09.13 Describe the structure and function of the urinary system.
	09.14 Describe the structure and function of the reproductive system.
	09.15 Describe the structure and function of the immune system.

Florida Department of Education
Student Performance Standards

Course Title: **Practical Nursing Foundations 2A**
Course Number: **8418430**
Course Credit: **1**

Course Description:

The objectives in the course include growth and development across the lifespan, performance of nursing procedures, pharmacology, mental health, healthy lifestyle and education for family and community awareness.

CTE Standards and Benchmarks	
01.0	Integrated Processes – Apply the following fundamental integrated processes to the practice of practical nursing and integrate them throughout the Client Needs categories and subcategories in every course of the program **(See Client Needs categories from NCSBN, 2023). This standard is part of EVERY course in the Practical Nursing program.** The student will be able to show:
01.01	Caring – Interaction of the practical nurse and client in an atmosphere of mutual respect and trust. In this collaborative environment, the practical nurse provides support and compassion to help achieve desired therapeutic outcomes.
01.02	Clinical judgment – The observed outcome of critical thinking and decision-making. It is an iterative process that uses nursing knowledge to observe and assess presenting situations, identify a prioritized client concern, and generate the best possible evidence-based solutions in order to deliver safe client care. The six clinical judgment functions include: recognizing cues, analyzing cues, prioritizing and hypothesizing, generating solutions, taking action, and evaluating outcomes.
01.03	Client problem-solving process (nursing process) – A scientific approach to client care that includes data collection, planning, implementation, and evaluation.
01.04	Communication and documentation – Verbal and nonverbal interactions between the practical nurse and the client, as well as other members of the healthcare team. Events and activities associated with client care are validated in written and/or electronic records that reflect standards of practice and accountability in the provision of care.
01.05	Culture and spirituality – Interaction of the nurse and the client (individual, family or group, including significant others, and population) that recognizes and considers the client-reported, self-identified, unique and individual preferences to client care, the applicable standard of care, and legal considerations.
01.06	Teaching and learning – Facilitation of the acquisition of knowledge, skills, and attitudes (KSAs) to assist in promoting a change in behavior.
01.07	Professionalism, respect, and civility toward clients and colleagues in all educational and practice settings.
01.08	Application of a self-care plan, including the demonstration of healthy lifestyle choices and personal health maintenance.
01.09	A demonstration of nursing care in clinical experiences, simulation, or skills lab of at least ___ hours.
10.0	Explain foundational thinking that supports human growth and development across the lifespan (Coordinated Care, Health Promotion and Maintenance). The student will be able to:

CTE Standards and Benchmarks	
	10.01 Provide care that meets the needs of the newborn less than 1 month old through the infant or toddler client up through 2 years.
	10.02 Provide care that meets the needs of the preschool, school-age, and adolescent client ages 3 through 17 years.
	10.03 Provide care that meets the needs of the adult client ages 18 through 64 years.
	10.04 Provide care that meets the needs of the adult client ages 65 and over.
	10.05 Compare the client to developmental milestones.
	10.06 Assist the client with expected life transitions (attachment to newborn, parenting, retirement).
	10.07 Reinforce client teaching on expected client reactions to grief and loss (denial – fear).
11.0	Develop teamwork and collaboration through clinical judgment, the nursing process, clinical reasoning, critical thinking, the use of SBAR (situation, background, assessment, recommendation), and the nursing care plan (Coordinated Care). The student will be able to:
	11.01 Organize and prioritize care based on client needs.
	11.02 Participate in client data collection.
	11.03 Collect data for health history (client medical history and family medical history).
	11.04 Collect baseline physical data (skin integrity, height, and weight).
	11.05 Perform focused data collection based on the client's condition (neurological checks, circulatory checks).
	11.06 Compare client laboratory values to normal laboratory values.
	11.07 Evaluate the appropriateness of the healthcare provider's order for the client.
12.0	Demonstrate nursing knowledge, skills, attitudes (KSAs), procedures, and the following skills (Coordinated Care, Safety and Infection Control, Health Promotion and Maintenance, Pharmacological Therapies, Reduction of Risk Potential, Physiological Adaptation). The student will be able to:
	12.01 Provide cooling/warming measures to restore normal body temperature.
	12.02 Perform wound care and/or a dressing change.
	12.03 Provide care for the client with a drainage device (wound drain, chest tube).
	12.04 Evaluate the client's oxygen (O_2) saturation.
	12.05 Intervene to improve the client's respiratory status (breathing treatment, suctioning, repositioning).

CTE Standards and Benchmarks	
	12.06 Perform blood glucose monitoring.
	12.07 Collect a specimen for diagnostic testing (including blood, urine, stool, sputum).
	12.08 Monitor diagnostic or laboratory test results.
	12.09 Use precautions to prevent injury and/or complications associated with a procedure or diagnosis.
	12.10 Assist with the performance of a diagnostic or invasive procedure.
	12.11 Reinforce client education about procedures and treatments.
	12.12 Monitor client responses to procedures and treatments.
	12.13 Insert, maintain, and remove a urinary catheter.
	12.14 Perform irrigation (urinary catheter, bladder, wound, ear, nose, eye).
	12.15 Provide care to a client with an ostomy (colostomy, ileostomy, urostomy).
	12.16 Insert, maintain, and remove a nasogastric (NG) tube (per facility policy).
	12.17 Provide site care for the client with enteral tubes.
	12.18 Provide feeding for the client with enteral tubes.
13.0	Demonstrate the use of clinical judgment to provide competent psychiatric or mental health care that includes the following diseases and disorders: schizophrenia, mood disorders, personality disorders, anxiety disorders, substance abuse, substance use disorders, impulse control disorders, eating disorders, and neurodevelopmental disorders (Psychosocial Integrity). The student will be able to:
	13.01 Reinforce education to caregivers/family on ways to manage the client with behavioral disorders.
	13.02 Incorporate behavioral management techniques when caring for a client.
	13.03 Participate in a client group session.
	13.04 Collect data regarding the client’s psychosocial functioning.
	13.05 Identify the client’s use of effective and ineffective coping mechanisms.
	13.06 Recognize stressors that affect client care.
	13.07 Assist the client to cope and adapt to stressful events and changes in health status.

CTE Standards and Benchmarks	
	13.08 Initiate and participate in security alerts (flight risk).
	13.09 Collect data on the client's potential for violence to self and others.
	13.10 Assist in managing the care of an angry and/or agitated client (de-escalation techniques).
	13.11 Plan care with consideration of the client's spiritual and cultural beliefs, and/or gender identity.
	13.12 Explore reasons for client non-compliance with the treatment plan..
	13.13 Assist in the care of a client experiencing sensory/perceptual alterations.
	13.14 Promote the positive self-esteem of a client.
	13.15 Identify signs and symptoms of substance abuse, substance use disorder, withdrawal, and overdose.
	13.16 Provide emotional support to the client.
	13.17 Use therapeutic communication techniques with the client.
	13.18 Promote a therapeutic environment.
	13.19 Provide family wellness education and information for the prevention of high-risk behaviors (substance abuse, sexual practices, smoking cessation information).
14.0	Demonstrate nursing knowledge, skills, attitudes (KSAs), and procedures related to safe administration of medication that include the following skills (Coordinated Care, Safety and Infection Control, Health Promotion and Maintenance, Pharmacological Therapies, Reduction of Risk Potential, Physiological Adaptation). The student will be able to:
	14.01 Perform calculations needed for medication administration.
	14.02 Reinforce education to the client regarding medications.
	14.03 Evaluate the client's response to medication (side effects, adverse reactions, interactions, therapeutic effects, critical laboratory values).
	14.04 Follow the rights of medication administration.
	14.05 Maintain medication safety practices (storage, checking for expiration dates, compatibility, disposal), including medical error prevention training.
	14.06 Reconcile and maintain medication list or medication administration record (prescribed medications, herbal supplements, over-the-counter medications).
	14.07 Collect required data prior to medication administration (contraindications, current medications).

CTE Standards and Benchmarks	
	14.08 Administer medication by oral route (including sublingual, buccal).
	14.09 Administer medication by various gastrointestinal tubes.
	14.10 Administer a subcutaneous, intradermal, or intramuscular medication.
	14.11 Mix client medications from two vials as necessary (insulin, reconstitution).
	14.12 Administer medication by ear, eye, nose, inhalation, rectum, vagina, or skin route.
	14.13 Count controlled substances and report discrepancies.
15.0	Interpret evidence-based practice to provide health awareness in community settings (Reduction of Risk Potential). The student will be able to:
	15.01 Participate in health screenings or health promotion programs.
	15.02 Identify community resources for clients.

Florida Department of Education
Student Performance Standards

Course Title: **Practical Nursing Foundations 2B**
Course Number: **8418440**
Course Credit: **1**

Course Description:

This course is a continuation of Practical Nursing Foundation 2A and may be concurrent with Practical Nursing Foundation 2A. Clinical experiences will allow the student to practice the role of the practical nurse as a member of the health team and to participate in the health and wellness aspects of the patient and family.

The clinical experience provides the student with the opportunity to build on acquired knowledge and skills, to practice and develop skills in selected procedures, including administration of medications, to apply nursing principles in meeting the needs of medical surgical patients including the aged and/or chronically ill patient, and practice and understand the role of the practical nurse. It reinforces and expands practice with common diseases included in Practical Nursing Foundations 1.

Florida Department of Education
Student Performance Standards

Course Title: **Practical Nursing Medical Surgical 1A**
Course Number: **8418450**
Course Credit: **1**

Course Description:

The objectives in the course include care for the Pre-Op and Post-Op patient and Medical/ Surgical Nursing procedures for the following body systems: Circulatory/ Cardiovascular, Respiratory, Lymphatic/Immune, Musculoskeletal, Endocrine, and Integumentary/Sensory.

CTE Standards and Benchmarks		
01.0		Integrated Processes – Apply the following fundamental integrated processes to the practice of practical nursing and integrate them throughout the Client Needs categories and subcategories in every course of the program **(See Client Needs categories from NCSBN, 2023). This standard is part of EVERY course in the Practical Nursing program.** The student will be able to show:
	01.01	Caring – Interaction of the practical nurse and client in an atmosphere of mutual respect and trust. In this collaborative environment, the practical nurse provides support and compassion to help achieve desired therapeutic outcomes.
	01.02	Clinical judgment – The observed outcome of critical thinking and decision-making. It is an iterative process that uses nursing knowledge to observe and assess presenting situations, identify a prioritized client concern, and generate the best possible evidence-based solutions in order to deliver safe client care. The six clinical judgment functions include: recognizing cues, analyzing cues, prioritizing and hypothesizing, generating solutions, taking action, and evaluating outcomes.
	01.03	Client problem-solving process (nursing process) – A scientific approach to client care that includes data collection, planning, implementation, and evaluation.
	01.04	Communication and documentation – Verbal and nonverbal interactions between the practical nurse and the client, as well as other members of the healthcare team. Events and activities associated with client care are validated in written and/or electronic records that reflect standards of practice and accountability in the provision of care.
	01.05	Culture and spirituality – Interaction of the nurse and the client (individual, family or group, including significant others, and population) that recognizes and considers the client-reported, self-identified, unique and individual preferences to client care, the applicable standard of care, and legal considerations.
	01.06	Teaching and learning – Facilitation of the acquisition of knowledge, skills, and attitudes (KSAs) to assist in promoting a change in behavior.
	01.07	Professionalism, respect, and civility toward clients and colleagues in all educational and practice settings.
	01.08	Application of a self-care plan, including the demonstration of healthy lifestyle choices and personal health maintenance.
	01.09	A demonstration of nursing care in clinical experiences, simulation, or skills lab of at least ___ hours.
16.0		Demonstrate the use of clinical judgment to care for pre-operative and post-operative clients (Reduction of Risk Potential, Physiological Adaptation). The student will be able to:

CTE Standards and Benchmarks
16.01 Assist with care for the client before and after a surgical procedure.
16.02 Provide care for a client with a fluid and electrolyte imbalance.
16.03 Remove wound sutures or staples.
16.04 Assist with the client's wound drainage device removal.
17.0 Demonstrate the use of clinical judgment to care for a medical surgical client (MS 1: cardiovascular/circulatory, respiratory, lymphatic/immune, musculoskeletal, endocrine, integumentary/sensory systems. (Reduction of Risk Potential, Physiological Adaptation). The student will be able to:
17.01 Identify signs and symptoms related to acute or chronic diseases or disorders.
17.02 Use data from various credible sources in making clinical decisions.
17.03 Apply evidence-based practice when providing care.
17.04 Recognize and report a change in the client's condition.
17.05 Reinforce education to the client regarding the client's care and condition.
17.06 Provide care for clients with diseases and disorders from the following body systems, including medications and nutritional needs:
• Cardiovascular/circulatory system
○ Perform an electrocardiogram (EKG/ECG).
○ Recognize and report basic abnormalities on a client cardiac monitor strip.
○ Assist in the care of a client with a pacing device.
• Respiratory system
○ Provide care for a client with a tracheostomy.
○ Provide care to a client on a ventilator.
• Lymphatic/immune systems
• Musculoskeletal systems
• Endocrine system

CTE Standards and Benchmarks
• Integumentary/sensory systems

Florida Department of Education
Student Performance Standards

Course Title: **Practical Nursing Medical Surgical 1B**
Course Number: **8418460**
Course Credit: **1**

Course Description:

This course is a continuation of Medical Surgical Nursing 1A and may be concurrent with Medical Surgical Nursing 1A. Clinical experiences will allow the student to practice the role of the practical nurse as a member of the health team and to participate in the health and wellness aspects of the patient and family.

The clinical experience provides the student with the opportunity to build on acquired knowledge and skills, to practice and develop skills in selected procedures, including administration of medications, to apply nursing principles in meeting the needs of medical surgical patients, the aged and/or chronically ill patient, and practice and understand the role of the practical nurse.

Florida Department of Education
Student Performance Standards

Course Title: **Practical Nursing Medical Surgical 2A**
Course Number: **8418470**
Course Credit: **1**

Course Description:

The objectives in the course include Medical Surgical Nursing procedures for the following body systems: Gastrointestinal, Neurological, Urinary and Reproductive or Oncologic.

CTE Standards and Benchmarks	
01.0	Integrated Processes – Apply the following fundamental integrated processes to the practice of practical nursing and integrate them throughout the Client Needs categories and subcategories in every course of the program **(See Client Needs categories from NCSBN, 2023). This standard is part of EVERY course in the Practical Nursing program.** The student will be able to show:
01.01	Caring – Interaction of the practical nurse and client in an atmosphere of mutual respect and trust. In this collaborative environment, the practical nurse provides support and compassion to help achieve desired therapeutic outcomes.
01.02	Clinical judgment – The observed outcome of critical thinking and decision-making. It is an iterative process that uses nursing knowledge to observe and assess presenting situations, identify a prioritized client concern, and generate the best possible evidence-based solutions in order to deliver safe client care. The six clinical judgment functions include: recognizing cues, analyzing cues, prioritizing and hypothesizing, generating solutions, taking action, and evaluating outcomes.
01.03	Client problem-solving process (nursing process) – A scientific approach to client care that includes data collection, planning, implementation, and evaluation.
01.04	Communication and documentation – Verbal and nonverbal interactions between the practical nurse and the client, as well as other members of the healthcare team. Events and activities associated with client care are validated in written and/or electronic records that reflect standards of practice and accountability in the provision of care.
01.05	Culture and spirituality – Interaction of the nurse and the client (individual, family or group, including significant others, and population) that recognizes and considers the client-reported, self-identified, unique and individual preferences to client care, the applicable standard of care, and legal considerations.
01.06	Teaching and learning – Facilitation of the acquisition of knowledge, skills, and attitudes (KSAs) to assist in promoting a change in behavior.
01.07	Professionalism, respect, and civility toward clients and colleagues in all educational and practice settings.
01.08	Application of a self-care plan, including the demonstration of healthy lifestyle choices and personal health maintenance.
01.09	A demonstration of nursing care in clinical experiences, simulation, or skills lab of at least ___ hours.
18.0	Demonstrate the use of clinical judgment to care for a medical surgical client (MS2: gastrointestinal, neurological, urinary, reproductive, oncologic) (Reduction of Risk Potential, Physiological Adaptation). The student will be able to:

CTE Standards and Benchmarks
18.01 Identify signs and symptoms related to acute or chronic diseases or disorders.
18.02 Use data from various credible sources in making clinical decisions.
18.03 Apply evidence-based practice when providing care.
18.04 Recognize and report change in the client's condition.
18.05 Reinforce education to client regarding the client's care and condition.
18.06 Provide care for clients with diseases and disorders from the following body systems, including medications and nutritional needs:
• Gastrointestinal system
○ Monitor continuous or intermittent suction of the nasogastric (NG) tube.
• Neurological system
• Urinary system
○ Check for urinary retention (bladder scan, palpation).
○ Provide care for a client receiving peritoneal dialysis or hemodialysis.
• Reproductive system
• Oncologic

Florida Department of Education
Student Performance Standards

Course Title: **Practical Nursing Medical Surgical 2B**
Course Number: **8418480**
Course Credit: **1**

Course Description:

This course is a continuation of Medical Surgical Nursing 2A and may be concurrent with Medical Surgical Nursing 2A. Clinical experiences will allow the student to practice the role of the practical nurse as a member of the health team and to participate in the health and wellness aspects of the patient and family.

The clinical experience provides the student with the opportunity to build on acquired knowledge and skills, to practice and develop skills in selected procedures, including administration of medications, to apply nursing principles in meeting the needs of medical surgical patients, the aged and/or chronically ill patient, and practice and understand the role of the practical nurse.

Florida Department of Education
Student Performance Standards

Course Title: **Practical Nursing Transition to Practice**
Course Number: **8418490**
Course Credit: **1**

Course Description:

The objectives in this course include obstetrics care, SIDS/SUIDS education for patients, pediatric care, and graduate transition and employability skills for the practical nurse.

The clinical experience provides the student with the opportunity to build on acquired knowledge and skills, to practice and develop skill in selected procedures, to apply nursing principles in meeting the needs of the obstetrical patient and the newborn, the child and the elderly patient and to practice the role of the practical nurse as a member of the health team and to participate in the health and wellness aspects of the patient and family.

CTE Standards and Benchmarks	
01.0	Integrated Processes – Apply the following fundamental integrated processes to the practice of practical nursing and integrate them throughout the Client Needs categories and subcategories in every course of the program **(See Client Needs categories from NCSBN, 2023). This standard is part of EVERY course in the Practical Nursing program.** The student will be able to show:
01.01	Caring – Interaction of the practical nurse and client in an atmosphere of mutual respect and trust. In this collaborative environment, the practical nurse provides support and compassion to help achieve desired therapeutic outcomes.
01.02	Clinical judgment – The observed outcome of critical thinking and decision-making. It is an iterative process that uses nursing knowledge to observe and assess presenting situations, identify a prioritized client concern, and generate the best possible evidence-based solutions in order to deliver safe client care. The six clinical judgment functions include: recognizing cues, analyzing cues, prioritizing and hypothesizing, generating solutions, taking action, and evaluating outcomes.
01.03	Client problem-solving process (nursing process) – A scientific approach to client care that includes data collection, planning, implementation, and evaluation.
01.04	Communication and documentation – Verbal and nonverbal interactions between the practical nurse and the client, as well as other members of the healthcare team. Events and activities associated with client care are validated in written and/or electronic records that reflect standards of practice and accountability in the provision of care.
01.05	Culture and spirituality – Interaction of the nurse and the client (individual, family or group, including significant others, and population) that recognizes and considers the client-reported, self-identified, unique and individual preferences to client care, the applicable standard of care, and legal considerations.
01.06	Teaching and learning – Facilitation of the acquisition of knowledge, skills, and attitudes (KSAs) to assist in promoting a change in behavior.
01.07	Professionalism, respect, and civility toward clients and colleagues in all educational and practice settings.

CTE Standards and Benchmarks	
	01.08 Application of a self-care plan, including the demonstration of healthy lifestyle choices and personal health maintenance.
	01.09 A demonstration of nursing care in clinical experiences, simulation, or skills lab of at least ___ hours.
19.0	Demonstrate the use of clinical judgment to care for an obstetric or maternal/newborn client needing intrapartum care (Health Promotion and Maintenance, Reduction of Risk Potential, Physiological Adaptation, Coordinated Care). The student will be able to:
	19.01 Identify signs and symptoms related to intrapartum care.
	19.02 Use data from various credible sources in making clinical decisions.
	19.03 Apply evidence-based practice when providing care.
	19.04 Recognize and report changes in a client's condition.
	19.05 Reinforce education to the client regarding the client's care and condition.
	19.06 Initiate and participate in security alerts (infant abduction).
	19.07 Provide care for a client needing intrapartum care.
	19.08 Assist with care for the antepartum client.
	19.09 Identify signs or symptoms of potential prenatal complications.
	19.10 Assist with monitoring a client in labor.
	19.11 Monitor recovery of the stable postpartum and newborn client.
20.0	Demonstrate the use of clinical judgment to care for a pediatric client with the following diseases or disorders, including SIDS/SUIDS (Health Promotion and Maintenance, Reduction of Risk Potential, Physiological Adaptation, Coordinated Care). The student will be able to:
	20.01 Identify signs and symptoms related to acute or chronic pediatric diseases or disorders.
	20.02 Use data from various credible sources in making clinical decisions.
	20.03 Apply evidence-based practice when providing care.
	20.04 Recognize and report changes in the client's condition.
	20.05 Reinforce education to the client and family regarding the client's care, condition, and safety.
	20.06 Provide care for a pediatric client.
	20.07 Identify clients in need of immunizations.

CTE Standards and Benchmarks	
21.0	Demonstrate the use of evidence-based practice and readiness for safe transition to nursing practice. The student will be able to:
21.01	Prepare an NCLEX-PN study plan to provide guidance for licensure application.
21.02	Prepare a resume and portfolio.
21.03	Apply employability skills and make appropriate employer connections for potential career opportunities.
21.04	Apply clinical judgement through the care of clients in a clinical setting (could be a preceptorship).
21.05	Describe the Florida Board of Nursing requirements for licensure renewal, including multi-state license.

Florida Department of Education
Student Performance Standards

Course Title: **Intravenous (IV) Therapy**
Course Number:
Course Credit:

Course Description:

The 30-hour Intravenous Therapy course may be taken after the student graduates from the program and includes the following standards and benchmarks:

CTE Standards and Benchmarks	
22.0	Demonstrate nursing knowledge, skills, attitudes (KSAs), and procedures related to safe intravenous access and intravenous medication administration that include the following skills (Coordinated Care, Safety and Infection Control, Health Promotion and Maintenance, Pharmacological Therapies, Reduction of Risk Potential, Physiological Adaptation). The student will be able to:
22.01	Calculate and monitor intravenous (IV) flow rate.
22.02	Administer intravenous hydrating fluids.
22.03	Perform a venipuncture for blood draws.
22.04	Insert, maintain, and remove a peripheral intravenous (IV) catheter.
22.05	Maintain a central venous catheter.
22.06	Administer intravenous piggyback (secondary) medications.
22.07	Maintain pain control devices (epidural, patient-controlled analgesia, peripheral nerve catheter).
22.08	Monitor transfusion of blood product.

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as, experimental, quality, and safety procedures, are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate and troubleshoot equipment/tools used to make observations. Students understand measurement error; and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

Clinical courses require contact hours in the clinical setting in order to complete the health science program. Hospitals, nursing homes, and other clinical facilities with clinical affiliation agreements limit the number of students that can rotate and/or be on site at one time. Most facilities, including hospitals and nursing homes, limit the number of students to 15. Due to these industry limitations, it is recommended that the student ratio be 15:1 (student/teacher) based on the clinical facilities that students attend to for clinical training.

Florida Standards for English Language Development (ELD)

English language learners communicate for social and instructional purposes within the school setting. ELD.K12.SI.1.1

English Language Development (ELD) Standards Special Notes:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. For additional information on the development and implementation of the ELD standards, please contact the Bureau of Student Achievement through Language Acquisition at sala@fldoe.org.

Special Notes

This program meets the Department of Health's education requirements for Florida Board of Nursing licensure renewal requirements. Although not a requirement for initial licensure, it is a requirement for renewal; therefore, the instructor **may** provide a certificate for renewal purposes to the student verifying these requirements have been met.

If students in this program are seeking a licensure, certificate, or registration through the Department of Health, please refer to 456.0635, F.S. for more information on disqualification for a license, certificate, or registration through the Department of Health.

This program focuses on broad, transferable skills and stresses understanding and demonstration of the following elements of the health care industry, planning, management, finance, technical and production skills, underlying principles of technology, labor issues, community issues and health, safety, and environmental issues.

Career and Technical Student Organization (CTSO)

CTSOs are co-curricular career and technical student organizations providing leadership training and reinforcing specific career and technical skills. Career and Technical Student Organizations provide activities for students as an integral part of the instruction offered. Other CTSOs not listed in this curriculum framework or recognized by the Florida Department of Education are permissible provided they support student mastery over the standards and benchmarks of this curriculum framework.

Cooperative Training – OJT

On-the-job training is appropriate but not required for this program. Whenever offered, the rules, guidelines, and requirements specified in the OJT framework apply.

Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities as identified on the secondary student's Individual Educational Plan (IEP) or 504 plan or postsecondary student's accommodations' plan to meet individual needs and ensure equal access. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

In addition to accommodations, some secondary students with disabilities (students with an IEP served in Exceptional Student Education (ESE)) will need modifications to meet their needs. Modifications change the outcomes or what the student is expected to learn, e.g., modifying the curriculum of a secondary career and technical education course. Note: postsecondary curriculum and regulated secondary programs cannot be modified.

Some secondary students with disabilities (ESE) may need additional time (i.e., longer than the regular school year), to master the student performance standards associated with a regular course or a modified course. If needed, a student may enroll in the same career and technical course more than once. Documentation should be included in the IEP that clearly indicates that it is anticipated that the student may need an additional year to complete a Career and Technical Education (CTE) course. The student should work on different competencies and new applications of competencies each year toward completion of the CTE course. After achieving the competencies identified for the year, the student earns credit for the course. It is important to ensure that credits earned by students are reported accurately. The district's information system must be designed to accept multiple credits for the same course number for eligible students with disabilities.

Florida Department of Education
Curriculum Framework

The standards and benchmarks for this program were updated for the 2026-27 academic year.

Program Title: **Electrocardiograph Technician**
Program Type: **Career Preparatory**
Career Cluster: **Health Science**

Secondary – Career Preparatory	
Program Number	8427100
CIP Number	0351090204
Grade Level	9-12
Program Length	3 credits
Teacher Certification	Refer to the **Program Structure** section.
CTSO	HOSA
SOC Codes (all applicable)	29-2031 -- Cardiovascular Technologists and Technicians 31-9099 -- Healthcare Support Workers, All Other
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml

Purpose

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Health Science career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of Health Science career cluster.

The content includes but is not limited to planning, management, finance, technical and production skills, underlying principles of technology, labor issues, community issues and health, safety, and environmental issues. Clinical learning experiences are an integral part of this program.

The program is designed to prepare students for employment as EKG Technicians (SOC Code: 29-2031 Cardiovascular Technologists and Technicians).

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Program Structure

This program is a planned sequence of instruction totaling three credits. The two credit Health Science Core (Health Science Anatomy & Physiology 8417100 or Anatomy and Physiology 2000350 or Anatomy and Physiology Honors 2000360 and Health Science Foundations 8417110) is required as a prerequisite for all programs. Secondary students completing the two required courses will not have to repeat the core in postsecondary.

To teach the courses listed below, instructors must hold at least one of the teacher certifications indicated for that course.

The following table illustrates the secondary program structure:

Course Number	Course Title	Teacher Certification	Length	SOC Code	Level	Graduation Requirement
8417100 **OR**	Health Science Anatomy & Physiology **OR**	ANY HEALTH OCCUP G (See DOE approved list) BIOLOGY 1	1 credit	31-9099	3	EQ
2000350 **OR** *2000360*	*Anatomy and Physiology* **OR** *Anatomy and Physiology Honors*	SCIENCE @4 HEALTH 6 BIOLOGY 1 HEALTH ED @4				
8417110	Health Science Foundations	ANY HEALTH OCCUP G (See DOE approved list)	1 credit	31-9099	3	CT
8427130	Electrocardiograph Technician 3	LAB TECH @7 7G EKG 7G REG NURSE 7 G PARAMEDIC @7 7G MED ASST 7G TEC X RAY @7 7G RESP THER @7 7G MED PROF 7G PRAC NURSE @7 %7%G (Must be a Registered Nurse)	1 credit	29-2031	3	CT

(Graduation Requirement Codes: CT= Career & Technical Education, EQ= Equally Rigorous Science, EC= Economics, MA= Mathematics, PL= Personal Financial Literacy)

Florida's Career Readiness Skills for CTE Programs

Employability Skills	
01.0	Apply academic skills to workplace scenarios.
01.01	Use reading skills.
01.02	Use writing skills.
01.03	Use mathematical strategies and procedures.
01.04	Use scientific principles and procedures.
02.0	Design a solution to an industry problem.
02.01	Use critical thinking.
02.02	Use creativity.
02.03	Make sound decisions.
02.04	Solve problems.
02.05	Reason.
02.06	Plan and organize.
03.0	Manage resources within an industry project
03.01	Manage time.
03.02	Manage money or resources.
03.03	Manage materials.
03.04	Manage personnel.
04.0	Oversee the subcomponents, operations and output of a technical or organizational system.
04.01	Manage systems.
04.02	Monitor systems.
04.03	Improve systems.
05.0	Use information for decision making.
05.01	Locate information.
05.02	Organize information.
05.03	Use information.

	05.04 Analyze information.
	05.05 Communicate information.
06.0	Apply relevant technology to workplace scenarios to aid productivity.
	06.01 Use technology.
07.0	Interpret and express interpersonal communication.
	07.01 Communicate verbally.
	07.02 Listen actively.
	07.03 Comprehend written material.
	07.04 Convey information in writing.
	07.05 Communicate nonverbally.
	07.06 Interpret nonverbal communication.
08.0	Interact with others to accomplish workplace goals.
	08.01 Collaborate with others in a team.
	08.02 Respond to customer needs.
	08.03 Exercise leadership.
	08.04 Negotiate to resolve conflict.
	08.05 Respect others.
09.0	Manage personal behavior to maximize productivity and professional growth.
	09.01 Demonstrate responsibility and self-discipline.
	09.02 Adapt and show flexibility.
	09.03 Work independently.
	09.04 Demonstrate a willingness to learn.
	09.05 Demonstrate integrity.
	09.06 Demonstrate professionalism.
	09.07 Take initiative.
	09.08 Display positive attitude.
	09.09 Take responsibility for professional growth.

Career Exploration & Planning	
10.0	Explain career opportunities aligned with the regional economy and personal aspirations.
10.01	Describe regional occupations that are high-demand, high-growth, high-wage and/or high-skill.
10.02	Describe careers aligned with his or her interests, skills and values based on career assessment, experiential learning, career informational interviews, research and/or reflection.
11.0	Explain postsecondary pathways aligned with his or her career aspirations.
11.01	Compare and contrast postsecondary pathways, including education, employment, entrepreneurship and enlistment (the “Four Es”).
11.02	Compare and contrast regional postsecondary training provider options, including apprenticeships, technical colleges, state colleges, universities and industry-recognized certification providers.
11.03	Define postsecondary credentialing and stacking options, including industry-recognized certifications, apprenticeship certificates of completion, career certificates, licenses and associate or baccalaureate degrees.
11.04	Compare postsecondary training data for training programs of interest, such as total costs, average student loan debt, and median earnings and job placement rates after program completion.
12.0	Develop a personalized career and academic plan.
12.01	Prioritize an occupation, credential and postsecondary training provider for plan formation.
12.02	Self-assess progress toward meeting graduation requirements and skill-development goals.
12.03	Develop and complete a chronological checklist of steps and deadlines prior to postsecondary training or national service application that includes any required documentation to gather, writing prompts and examinations.
12.04	Identify a variety of financial aid opportunities, including scholarships, grants, savings, work, work-study programs, private loans and federal loans.
12.05	Develop a postsecondary training budget that is inclusive of living and school expenses.
Job Attainment	
13.0	Find, assess and apply to job opportunities.
13.01	Identify online job posts relevant to his or her career aspirations.
13.02	Compare and contrast the job posts’ required qualifications, job duties, compensation, benefits and employers.
13.03	Define what information, documentation and writing prompts are required for the positions.
14.0	Communicate personal competence, character and fit for a job opportunity.
14.01	Develop a resume.
14.02	Write a cover letter.
14.03	Curate a professional portfolio that includes work products.
14.04	Prepare for and experience a mock job interview.

15.0	Cultivate and leverage relationships to professionally advance.
	15.01 Request a signed reference letter, letter of recommendation and/or an online skill/professionalism endorsement.
	15.02 Develop a plan to cultivate a professional digital footprint.
	15.03 Develop a networking plan for a specific industry of interest.

Standards

After successfully completing this program, the student will be able to perform the following:

Health Science Core

01.0 Analyze and interpret an overview of the human body, including organization and chemical process.
02.0 Apply correct medical terminology relating to body structure and function within a real-world application.
03.0 Evaluate cells and tissues microscopically and macroscopically and relate their specialized functions.
04.0 Analyze the integumentary system in relation to health and disease.
05.0 Analyze the skeletal system in relation to health and disease.
06.0 Analyze the muscular system in relation to health and disease.
07.0 Analyze the nervous system in relation to health and disease.
08.0 Analyze the endocrine system in relation to health and disease.
09.0 Analyze the cardiovascular/circulatory system in relation to health and disease.
10.0 Analyze the lymphatic and immune systems in relation to health and disease.
11.0 Analyze the respiratory system in relation to health and disease.
12.0 Analyze the digestive system in relation to health and disease.
13.0 Analyze the urinary system in relation to health and disease.
14.0 Analyze both the male and female reproductive systems in relation to health and disease.
15.0 Identify and explain factors relating to genetics and disease.
16.0 Evaluate and apply the principles of disease transmission and control to real-world scenarios.
17.0 Demonstrate knowledge of the healthcare delivery system and health occupations.
18.0 Demonstrate the ability to communicate and use interpersonal skills effectively.
19.0 Demonstrate legal and ethical responsibilities.
20.0 Demonstrate an understanding of and apply wellness and disease concepts.
21.0 Recognize and practice safety and security procedures.
22.0 Recognize and respond to emergency situations.
23.0 Recognize and practice infection control procedures.
24.0 Demonstrate an understanding of information technology applications in healthcare.
25.0 Demonstrate employability skills.
26.0 Demonstrate knowledge of blood borne diseases, including HIV/AIDS.
27.0 Apply basic math and science skills.

Electrocardiograph Technician (EKG) Technician 3

28.0 Describe the cardiovascular system.
29.0 Identify legal and ethical responsibilities of an EKG technician.
30.0 Demonstrate knowledge of, apply and use medical instrumentation modalities.
31.0 Perform patient care techniques in the health care facility.
32.0 Recognize normal and abnormal monitoring and testing results.

33.0 Describe cardiovascular drugs, their actions, use and adverse effects.
34.0 Demonstrate knowledge of other cardiovascular diagnostic modalities.

Florida Department of Education
Student Performance Standards

Health Science Core

The first two courses in this program are referred to as the Health Science Core and consist of the courses Health Science Anatomy & Physiology (8417100) and Health Science Foundations (8417110). **To ensure consistency whenever these courses are offered, the standards and benchmarks for the health science core have been placed in a separate document. To access this document, visiting this link:** https://www.fldoe.org/file/20894/health-sci-core-secondary-2627.rtf

The two credit core is required as a prerequisite for all secondary programs except for Practical Nursing and Pharmacy Technician. Secondary students completing the two required courses will not have to repeat the core in postsecondary. When the recommended sequence is followed, the structure allows students to complete at specified courses for employment or remain for advanced training or cross-training.

Course Title: **Health Science Anatomy & Physiology**
Course Number: **8417100**
Course Credit: **1**

Course Description:

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as, experimental quality, and safety procedures will be an integral part of this course. Students will interact with materials and primary sources of data or with secondary sources of data to observe and understand the natural world. Students will develop an understanding of measurement error, and develop the skills to aggregate, interpret, and present the data and resulting conclusions. Equipment and supplies will be provided to enhance these hands-on experiences for students. A minimum of 20% of classroom time will be dedicated to laboratory experiences.

CTE Standards and Benchmarks National Standards

This course is part of the secondary Health Core consisting of an overview of the human body, both structurally and functionally with emphasis on the pathophysiology and transmission of disease. Medical terminology is an integral part of the course.

The course Anatomy and Physiology (2000350) or Anatomy and Physiology Honors (2000360) may be substituted for the course Health Science Anatomy & Physiology (8417100) and their standards can be found at www.cpalms.org.

The course Health Science Anatomy & Physiology (8417100) is designated as an equally rigorous (EQ) science credit.

Course Title: **Health Science Foundations**
Course Number: **8417110**
Course Credit: **1**

Course Description:
This course is part of the Secondary Health Core designed to provide the student with an in depth knowledge of the health care system and associated occupations. Emphasis is placed on communication and interpersonal skills, use of technology, ethics and the development of critical thinking and problem solving skills. Students may shadow professionals throughout the course.

Florida Department of Education
Student Performance Standards

Course Title: **Electrocardiograph Technician 3**
Course Number: **8427130**
Course Credit: **1**

Course Description:

This course prepares students to be employed as Electrocardiograph Technicians. Content includes, but is not limited to, a foundation in the cardiovascular system, safety measures for the individual, co-workers and patients as well we training in the appropriate theories and instruments used by an Electrocardiograph Technician.

CTE Standards and Benchmarks	
28.0	Describe the cardiovascular system. The student will be able to:
28.01	Locate the heart and surrounding structures.
28.02	Diagram and label the parts of the heart and list the functions of each labeled part.
28.03	Trace the flow of blood through the cardiopulmonary system.
28.04	Identify and describe the electrical conduction system.
28.05	Describe the function of the autonomic nervous system.
28.06	Describe signs and symptoms of a patient demonstrating poor perfusion or low cardiac output and state the importance of rapid reporting.
29.0	Identify legal and ethical responsibilities of an EKG technician. The student will be able to:
29.01	Recognize and practice legal and ethical responsibilities as they relate to an EKG aide.
29.02	Maintain a safe and efficient work environment.
29.03	Maintain EKG equipment per manufactures guidelines so it will be safe and accurate.
29.04	Implement appropriate Joint Commission patient safety goals and adhere to HIPAA regulations regarding Protected Health Information (PHI).
30.0	Demonstrate knowledge of, apply and use medical instrumentation modalities. The student will be able to:
30.01	Calibrate and maintain EKG equipment in the work environment.

CTE Standards and Benchmarks	
	30.02 Identify three types of lead systems standard/limb, augmented, and precordial/chest).
	30.03 Apply the concepts and history of Einthoven's triangle and Wilson's Central Terminal to EKG tracing.
	30.04 Demonstrate proper lead placement including lead placement with special considerations for various patients with special needs to include pediatric, amputee, and posterior and right sided EKGs.
	30.05 Identify artifacts and mechanical problems.
	30.06 Perform a 3, 5, and 12 lead EKG.
	30.07 Verify accuracy of lead placement on the EKG.
	30.08 Verify setting on the EKG machine such as paper speed, sensitivity (gain), and Hertx (Hz) prior to use.
31.0	Perform patient care techniques in the health care facility. The student will be able to:
	31.01 Describe the physical and mental preparation of the patient for EKG testing.
	31.02 Identify patient and verify the requisition order.
	31.03 Prepare patient for cardiovascular diagnostic testing.
	31.04 Obtain patient's vitals (temperature, pulse, respirations, blood pressure, and pulse oximetry) in preparation for cardiovascular diagnostic testing and report abnormalities.
	31.05 State precautions required when performing cardiovascular diagnostic procedures.
	31.06 Convey the importance of maintaining a safe patient environment and evaluate potential hazards in the work environment.
32.0	Recognize normal and abnormal monitoring and testing results. The student will be able to:
	32.01 Inspect and measure the various waveforms of a cardiac cycle including, segments, complexes, heart rates and intervals.
	32.02 Calculate heart rate and determine the regularity of heart rate.
	32.03 Identify electrical axis.
	32.04 Recognize normal and deviations from normal sinus rhythms and report dysrhythmias that are not normal sinus rhythms.
	32.05 Recognize all atrial rhythms.
	32.06 Recognize all junctional rhythms.
	32.07 Recognize all ventricular rhythms.

CTE Standards and Benchmarks	
	32.08 Recognize all types of heart blocks.
	32.09 Identify myocardial ischemia, injury, and infarction on EKG tracing.
	32.10 Recognize atrial and ventricular hypertrophies.
	32.11 Recognize ectopic beats and any rare phenomena.
	32.12 Describe potential patient responses to all dysrhythmias and other EKG abnormalities.
	32.13 Recognize and respond promptly to life threatening dysrhythmias during continuous monitoring such as telemetry and diagnostic testing.
	32.14 Recognize pacemaker spikes on the EKG and state the purpose of pacemakers.
	32.15 Recognize normal and deviations from single-chamber and dual-chamber pacemakers as well as all implantable cardioverter defibrillators.
33.0	Describe cardiovascular drugs, their actions, use, and adverse effects. The student will be able to:
	33.01 Describe the mechanisms by which common cardiovascular drugs work including actions and adverse effects.
	33.02 Differentiate between normal and abnormal EKG changes potentially due to drugs.
34.0	Demonstrate knowledge of other cardiovascular diagnostic modalities. The student will be able to:
	34.01 Demonstrate knowledge of the application of a Holter Monitor and event monitor and provide patient education of its use.
	34.02 Describe the procedures for stress testing/scanning exercise treatment and provide patient education.
	34.03 Understand and demonstrate patient activity log, patient records, symptoms, interpretation and activities documentation for all types of monitoring.
	34.04 Describe activities and symptoms that should be documented for all types of monitoring.
	34.05 Describe other modalities of cardiovascular diagnosis and interpretation (i.e., angiogram, echocardiogram, etc.).
	34.06 Understand patient cardiac alarm policy per acceptable facility guideline. .

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as, experimental, quality, and safety procedures are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate and troubleshoot equipment/tools used to make observations. Students understand measurement error; and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

This program requires a clinical component of approximately 50% the length of the courses following the health science core. A portion of the clinical experience can be achieved through simulation when appropriate.

Clinical courses require contact hours in the clinical setting in order to complete the health science program. Hospitals, nursing homes, and other clinical facilities with clinical affiliation agreements limit the number of students that can rotate and/or be on site at one time. Most facilities, including hospitals and nursing homes, limit the number of students to 15. Due to these industry limitations, it is recommended that the student ratio be 15:1 (student/teacher) based on the clinical facilities that students attend to for clinical training.

Florida Standards for English Language Development (ELD)

English language learners communicate for social and instructional purposes within the school setting. ELD.K12.ELL.SI.1

English Language Development (ELD) Standards Special Notes:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. For additional information on the development and implementation of the ELD standards, please contact the Bureau of Student Achievement through Language Acquisition at sala@fldoe.org .

Special Notes

Following the completion of the Health Science Core, the student is eligible to take the National Health Care Foundation Skill Standards Assessment with instructor approval and the completion of a portfolio.

This program meets the Department of Health's education requirements for HIV/AIDS, Domestic Violence and Prevention of Medical Errors. Although not a requirement for initial licensure, it is a requirement for renewal, therefore the instructor **may** provide a certificate for renewal purposes to the student verifying these requirements have been met.

If students in this program are seeking a licensure, certificate or registration through the Department of Health, please refer to 456.0635, F.S. for more information on disqualification for a license, certificate, or registration through the Department of Health.

A voluntary national certification is available through an exam offered by the National Health Career Association, 194 Rt. 46 East, Fairfield, NJ 07004 (973/244-0023).

Career and Technical Student Organization (CTSO)

CTSOs are co-curricular career and technical student organizations providing leadership training and reinforcing specific career and technical skills. Career and Technical Student Organizations provide activities for students as an integral part of the instruction offered. Other CTSOs not listed in this curriculum framework or recognized by the Florida Department of Education are permissible provided they support student mastery over the standards and benchmarks of this curriculum framework.

Cooperative Training – OJT

On-the-job training is appropriate but not required for this program. Whenever offered, the rules, guidelines, and requirements specified in the OJT framework apply.

Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities as identified on the secondary student's Individual Educational Plan (IEP) or 504 plan or postsecondary student's accommodations' plan to meet individual needs and ensure equal access. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

In addition to accommodations, some secondary students with disabilities (students with an IEP served in Exceptional Student Education (ESE)) will need modifications to meet their needs. Modifications change the outcomes or what the student is expected to learn, e.g., modifying the curriculum of a secondary career and technical education course. Note: postsecondary curriculum and regulated secondary programs cannot be modified.

Some secondary students with disabilities (ESE) may need additional time (i.e., longer than the regular school year), to master the student performance standards associated with a regular course or a modified course. If needed, a student may enroll in the same career and technical course more than once. Documentation should be included in the IEP that clearly indicates that it is anticipated that the student may need an additional year to complete a Career and Technical Education (CTE) course. The student should work on different competencies and new applications of competencies each year toward completion of the CTE course. After achieving the competencies identified for the year, the student earns credit for the course. It is important to ensure that credits earned by students are reported accurately. The district's information system must be designed to accept multiple credits for the same course number for eligible students with disabilities.

Florida Department of Education
Curriculum Framework

Program Title: **Behavioral Health Technician**
Program Type: **Career Preparatory**
Career Cluster: **Health Science**

Secondary – Career Preparatory	
Program Number	8701000
CIP Number	0351150205
Grade Level	9-12
Program Length	3 credits
Teacher Certification	Refer to the **Program Structure** section.
CTSO	HOSA
SOC Codes (all applicable)	29-5053 -- Psychiatric Technicians 29-2099 -- Health Technologists and Technicians, All Other 31-9099 -- Healthcare Support Workers, All Other 21-1094 -- Community Health Workers
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml

Purpose

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Health Science career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of the Health Science career cluster.

The content includes, but is not limited to planning, management, finance, technical and production skills, underlying principles of technology, labor issues, community issues and health, safety, and environmental issues. Clinical and/or work-based learning experiences are an integral part of this program.

The program is designed to prepare students for employment as Psychiatric Technicians/ Behavioral Health Technicians (SOC Code 29-5053), Health Technologists and Technicians (SOC Code 29-2099), Healthcare Support Workers (SOC Code 31-9099), and Community Health Workers (SOC Code 21-1094). Additional certification opportunities are noted at the end of the document under Special Notes.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Program Structure

This program is a planned sequence of instruction consisting of 3 credits. The two credit Health Science Core courses (Health Science Anatomy & Physiology 8417100 and Health Science Foundations 8417110) are required as a prerequisite for this program. Secondary students completing the two required courses **will not** have to repeat the core in postsecondary.

To teach the course(s) listed below, instructors must hold at least one of the teacher certifications indicated for that course.

The following table illustrates the secondary program structure:

Course Number	Course Title	Teacher Certification	Length	SOC Code	Level	Graduation Requirement
8417100 **OR**	Health Science Anatomy & Physiology **OR**	ANY HEALTH OCCUP G (See DOE approved list) BIOLOGY 1	1 credit	31-9099	3	EQ
2000350 **OR** *2000360*	*Anatomy and Physiology* **OR** *Anatomy and Physiology Honors*	SCIENCE @4 HEALTH 6 BIOLOGY 1 HEALTH ED @4				
8417110	Health Science Foundations	ANY HEALTH OCCUP G (See DOE approved list)	1 credit	31-9099	3	CT
8701010	Behavioral Health Technician 3	MENT HEAL 7G REG NURSE 7G PARAMEDIC @7 7G MED ASST 7G MED PROF 7G EMT 7G LPN 7G	1 credit	29-5053 29-2099 31-9099 21-1094	3	CT

(Graduation Requirement Codes: CT= Career & Technical Education, EQ= Equally Rigorous Science, EC= Economics, MA= Mathematics, PL= Personal Financial Literacy)

Florida's Career Readiness Skills for CTE Programs

Employability Skills	
01.0	Apply academic skills to workplace scenarios.
01.01	Use reading skills.
01.02	Use writing skills.
01.03	Use mathematical strategies and procedures.
01.04	Use scientific principles and procedures.
02.0	Design a solution to an industry problem.
02.01	Use critical thinking.
02.02	Use creativity.
02.03	Make sound decisions.
02.04	Solve problems.
02.05	Reason.
02.06	Plan and organize.
03.0	Manage resources within an industry project
03.01	Manage time.
03.02	Manage money or resources.
03.03	Manage materials.
03.04	Manage personnel.
04.0	Oversee the subcomponents, operations and output of a technical or organizational system.
04.01	Manage systems.
04.02	Monitor systems.
04.03	Improve systems.
05.0	Use information for decision making.
05.01	Locate information.
05.02	Organize information.
05.03	Use information.

	05.04 Analyze information.
	05.05 Communicate information.
06.0	Apply relevant technology to workplace scenarios to aid productivity.
	06.01 Use technology.
07.0	Interpret and express interpersonal communication.
	07.01 Communicate verbally.
	07.02 Listen actively.
	07.03 Comprehend written material.
	07.04 Convey information in writing.
	07.05 Communicate nonverbally.
	07.06 Interpret nonverbal communication.
08.0	Interact with others to accomplish workplace goals.
	08.01 Collaborate with others in a team.
	08.02 Respond to customer needs.
	08.03 Exercise leadership.
	08.04 Negotiate to resolve conflict.
	08.05 Respect others.
09.0	Manage personal behavior to maximize productivity and professional growth.
	09.01 Demonstrate responsibility and self-discipline.
	09.02 Adapt and show flexibility.
	09.03 Work independently.
	09.04 Demonstrate a willingness to learn.
	09.05 Demonstrate integrity.
	09.06 Demonstrate professionalism.
	09.07 Take initiative.
	09.08 Display positive attitude.
	09.09 Take responsibility for professional growth.

Career Exploration & Planning	
10.0	Explain career opportunities aligned with the regional economy and personal aspirations.
10.01	Describe regional occupations that are high-demand, high-growth, high-wage and/or high-skill.
10.02	Describe careers aligned with his or her interests, skills and values based on career assessment, experiential learning, career informational interviews, research and/or reflection.
11.0	Explain postsecondary pathways aligned with his or her career aspirations.
11.01	Compare and contrast postsecondary pathways, including education, employment, entrepreneurship and enlistment (the “Four Es”).
11.02	Compare and contrast regional postsecondary training provider options, including apprenticeships, technical colleges, state colleges, universities and industry-recognized certification providers.
11.03	Define postsecondary credentialing and stacking options, including industry-recognized certifications, apprenticeship certificates of completion, career certificates, licenses and associate or baccalaureate degrees.
11.04	Compare postsecondary training data for training programs of interest, such as total costs, average student loan debt, and median earnings and job placement rates after program completion.
12.0	Develop a personalized career and academic plan.
12.01	Prioritize an occupation, credential and postsecondary training provider for plan formation.
12.02	Self-assess progress toward meeting graduation requirements and skill-development goals.
12.03	Develop and complete a chronological checklist of steps and deadlines prior to postsecondary training or national service application that includes any required documentation to gather, writing prompts and examinations.
12.04	Identify a variety of financial aid opportunities, including scholarships, grants, savings, work, work-study programs, private loans and federal loans.
12.05	Develop a postsecondary training budget that is inclusive of living and school expenses.
Job Attainment	
13.0	Find, assess and apply to job opportunities.
13.01	Identify online job posts relevant to his or her career aspirations.
13.02	Compare and contrast the job posts’ required qualifications, job duties, compensation, benefits and employers.
13.03	Define what information, documentation and writing prompts are required for the positions.
14.0	Communicate personal competence, character and fit for a job opportunity.
14.01	Develop a resume.
14.02	Write a cover letter.
14.03	Curate a professional portfolio that includes work products.
14.04	Prepare for and experience a mock job interview.

15.0	Cultivate and leverage relationships to professionally advance.
	15.01 Request a signed reference letter, letter of recommendation and/or an online skill/professionalism endorsement.
	15.02 Develop a plan to cultivate a professional digital footprint.
	15.03 Develop a networking plan for a specific industry of interest.

Standards

After successfully completing this program, the student will be able to perform the following:

Health Science Core

01.0 Analyze and interpret an overview of the human body, including organization and chemical process.
02.0 Apply correct medical terminology relating to body structure and function within a real-world application.
03.0 Evaluate cells and tissues microscopically and macroscopically and relate their specialized functions.
04.0 Analyze the integumentary system in relation to health and disease.
05.0 Analyze the skeletal system in relation to health and disease.
06.0 Analyze the muscular system in relation to health and disease.
07.0 Analyze the nervous system in relation to health and disease.
08.0 Analyze the endocrine system in relation to health and disease.
09.0 Analyze the cardiovascular/circulatory system in relation to health and disease.
10.0 Analyze the lymphatic and immune systems in relation to health and disease.
11.0 Analyze the respiratory system in relation to health and disease.
12.0 Analyze the digestive system in relation to health and disease.
13.0 Analyze the urinary system in relation to health and disease.
14.0 Analyze both the male and female reproductive systems in relation to health and disease.
15.0 Identify and explain factors relating to genetics and disease.
16.0 Evaluate and apply the principles of disease transmission and control to real-world scenarios.
17.0 Demonstrate knowledge of the healthcare delivery system and health occupations.
18.0 Demonstrate the ability to communicate and use interpersonal skills effectively.
19.0 Demonstrate legal and ethical responsibilities.
20.0 Demonstrate an understanding of and apply wellness and disease concepts.
21.0 Recognize and practice safety and security procedures.
22.0 Recognize and respond to emergency situations.
23.0 Recognize and practice infection control procedures.
24.0 Demonstrate an understanding of information technology applications in healthcare.
25.0 Demonstrate employability skills.
26.0 Demonstrate knowledge of blood borne diseases, including HIV/AIDS.
27.0 Apply basic math and science skills.

Behavioral Health Technician 3

28.0 Demonstrate and implement knowledge of behavioral and mental health, mental illness, including substance use, abuse and addiction.
29.0 Implement crisis intervention techniques and emergency services in the behavioral and mental health setting.
30.0 Analyze, apply, and integrate national standards of practice in behavioral health care and human services, monitoring the implementation and effectiveness of policies and procedures for screening, assessment, and management of individuals.
31.0 Analyze and explain the foundations of behavioral health and the impact on community health and patient care.

32.0 Perform skills, examine, measure and interpret documentation related to direct care and recovery support system in various types of community and treatment settings as a member of a multidisciplinary team.
33.0 Provide biological, psychological and social support in conflict resolution and safety techniques.
34.0 Practice and perform duties, demonstrating professional responsibility and scope of practice.
35.0 Demonstrate an understanding of various behavioral and mental health diseases and disorders, observable signs and symptoms, and general interventions.
36.0 Perform skills and provide documentation related to caring for and supervising the mental health patient in various types of treatment settings.

Florida Department of Education
Student Performance Standards

Health Science Core

The first two courses in this program are referred to as the Health Science Core and consist of the courses Health Science Anatomy & Physiology (8417100) and Health Science Foundations (8417110). **To ensure consistency whenever these courses are offered, the standards and benchmarks for the health science core have been placed in a separate document. To access this document, visit this link:** https://www.fldoe.org/file/20894/health-sci-core-secondary-2627.rtf

The two-credit core is required as a prerequisite for all secondary programs except for Practical Nursing and Pharmacy Technician. Secondary students completing the two required courses will not have to repeat the core in postsecondary. When the recommended sequence is followed, the structure allows students to complete at specified courses for employment or remain for advanced training or cross-training.

Course Title: **Health Science Anatomy & Physiology**
Course Number: **8417100**
Course Credit: **1**

Course Description:

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as, experimental quality, and safety procedures will be an integral part of this course. Students will interact with materials and primary sources of data or with secondary sources of data to observe and understand the natural world. Students will develop an understanding of measurement error, and develop the skills to aggregate, interpret, and present the data and resulting conclusions. Equipment and supplies will be provided to enhance these hands-on experiences for students. A minimum of 20% of classroom time will be dedicated to laboratory experiences.

This course is part of the secondary Health Core consisting of an overview of the human body, both structurally and functionally with emphasis on the pathophysiology and transmission of disease. Medical terminology is an integral part of the course.

The course Anatomy and Physiology (2000350), Anatomy and Physiology Honors (2000360) or Human Body Systems (8708120) may be substituted for the course Health Science Anatomy & Physiology (8417100) and their standards can be found at www.cpalms.org.

The course Health Science Anatomy & Physiology (8417100) is designated as an equally rigorous (EQ) science credit.

Course Title: **Health Science Foundations**
Course Number: **8417110**
Course Credit: **1**

Course Description:
This course is part of the Secondary Health Core designed to provide the student with an in-depth knowledge of the health care system and associated occupations. Emphasis is placed on communication and interpersonal skills, use of technology, ethics and the development of critical thinking and problem-solving skills. Students may shadow professionals throughout the course.

Florida Department of Education
Student Performance Standards

Course Title: **Behavioral Health Technician 3**
Course Number: **8701010**
Course Credit: **1**

Course Description:

Students investigate concepts and interventions in behavioral and mental health. This course is designed to provide an integrated cross-trained foundation and practical experience in behavioral and social sciences. The content includes, but is not limited to, basic psychopharmacology, medical terminology, electronic medical records and documentation, patient teaching and education, wellness and disease concepts, mental illness, growth and development, diseases and disorders including anxiety, bipolar disorder, depression, Alzheimer's disease, dementia, personality disorders, schizophrenia, and psychosis. Additional topics include emergency and crisis intervention, suicide prevention, intellectual developmental disabilities, substance abuse, group therapy, stress management, employability skills, safety and security issues, legal and ethical concepts, statistical measurements, neurological and psychological applications, therapeutic communication, and assessment tools in behavioral health.

CTE Standards and Benchmarks	
28.0	Demonstrate and implement knowledge of behavioral and mental health, mental illness, including substance use, abuse and addiction. The student will be able to:
28.01	Define, discuss, and differentiate behavioral health, mental health, social and psychological behaviors.
28.02	Create a flyer classifying mental illnesses and their contributing factors.
28.03	Evaluate and explain substance use, misuse, abuse, dependency and addiction, co-occurring disorders, and comorbidity.
28.04	Design a poster examining and categorizing information, data and fact sheets from The American Psychiatric Association, Diagnostic and Statistical Manual of Mental Disorders (DSM-5).
28.05	Display awareness of emerging trends and current issues in behavioral and mental health - i.e., Healthy People 2030 Mental Health Objectives, Office of Disease Prevention and Health Promotion (ODPHP) - www.healthypeople.gov.
28.06	Apply and implement knowledge of Maslow's hierarchy of needs, psychological and physical responses to stress, ego defense mechanisms, stages of grief, and stages of growth and development while caring for the mental health patient.
28.07	Facilitate and implement knowledge of cultural and spiritual considerations while caring for the mental health patient.
28.08	Analyze, recognize and explain tools to managing personal bias, personal cultural identity, diversity, stereotypes, and skills to avoid and respond to micro-aggressions.
28.09	Demonstrate and apply knowledge of the 10 classes of drugs with Substance–Related and Addictive Disorders including prevalence, risks, consequences, intoxication, and withdrawal: • Alcohol • Caffeine

CTE Standards and Benchmarks	
	• Cannabis • Hallucinogens • Inhalants • Opioids • Sedatives, Hypnotics and Anxiolytics • Stimulants • Tobacco • Other - synthetic drugs and bath salts
28.10	Analyze and defend several theories about what causes addiction or substance dependence and group them into the following four categories: Clinical, Social, Medical/Biological, and Biopsychosocial.
29.0	Implement crisis intervention techniques and emergency services in the behavioral and mental health setting. The student will be able to:
29.01	Discuss methods of suicide and suicide ideation, recognizing and comparing self-harm behaviors.
29.02	Demonstrate knowledge of restraint policies, suicide precautions, and no harm contract and limitations.
29.03	Demonstrate vigilance in identifying clues of a patient's suicidal intent; both direct and indirect and notify team member in charge.
29.04	Classify and demonstrate knowledge of risk factors for suicide and discuss suicide assessment.
29.05	Access plan of action and follow facility procedures for suicidal patient, potential homicide, and emergency medical services.
29.06	Discuss and summarize the Five-Phase Aggression Cycle: triggering phase, escalation phase, crisis phase, recovery phase, and post crisis phase.
29.07	Evaluate behavior and remain with individual who is experiencing panic anxiety.
29.08	Utilize reality-oriented approach, active listening, and attend to immediate needs.
29.09	Assess behavioral patterns and demonstrate vigilance in identifying behaviors that will initiate in increase in agitation, notifying team members, if observed.
29.10	Discuss emergency and crisis intervention measures for Inpatient setting including: show of force, locked seclusion, use of prn medications, and seclusion and restraints.
29.11	Demonstrate knowledge of facility's crisis intervention policy and crisis team to be notified if de-escalation techniques fail, and patient escalates to physical aggression.
29.12	Manage and assist with reintegration of patient to environment when stabilized and is able to participate.
29.13	Perform room searches, practice safety measures, and supervise to protect the patient; removing all potentially harmful objects and monitoring them closely during mealtime, medication administration, bathroom use, and activities.
29.14	Display and communicate that patient has value, encouraging patient to express honest feelings, including anger.

CTE Standards and Benchmarks	
	29.15 Demonstrate different levels of suicidal precautions as needed including 1:1 contact and constant visual observation, or every 15-minute checks and document.
	29.16 Demonstrate knowledge of notifying the healthcare provider in charge or emergency services if patient communicates suicide plan or describes means to carry out suicide plan.
	29.17 Enforce policies and procedures related to aggressive and destructive behaviors including establishing an understanding of acceptable behaviors with the patient and enforcing rules for unacceptable behaviors.
	29.18 Demonstrate knowledge of de-escalation techniques: calm voice, reduce stimulation, verbal redirect, time out (quiet time-open seclusion) relaxation techniques, distract with positive activity, discuss alternative strategies etc.
30.0	Analyze, apply, and integrate national standards of practice in behavioral health care and human services, monitoring the implementation and effectiveness of policies and procedures for screening, assessment, and management of individuals. The student will be able to:
	30.01 Assess and improve the accuracy of the identification of individuals when providing care, treatment or services.
	30.02 Measure and validate patient safety goals to improve the safety of using medications and high-risk interventions.
	30.03 Evaluate and formulate a care plan following The Joint Commission national standards (National Patient Safety Goals).
	30.04 Compare, contrast, and critique a behavioral health scenario promoting equity and diversity, applying and implementing culturally and linguistically appropriate strategies and services.
	30.05 Examine and differentiate the process of psychopharmacology and pharmacological aspects of patient care.
	30.06 Supervise and document patient medication administration, reporting side effects, adverse reactions, or allergies.
	30.07 Encourage patient to take prescribed medication; facilitating understanding of patient's rights to taking or refusing medication.
	30.08 Demonstrate knowledge of 6 Rights of Medication Administration (right medication, right dose, right patient, right time, right route, and right documentation) and policies.
	30.09 Collect and analyze data entry into electronic medical records platform, verifying accuracy of patient records and information.
	30.10 Determine patient's medication history from records or family in relation to re-allergic reactions.
	30.11 Assemble information about properties of medications being administered, their potential side effects and drug interactions.
	30.12 Assure adequate supply and safeguard storage of medications to prevent overdose, ensuring patient safety.
31.0	Analyze and explain the foundations of behavioral health and the impact on community health and patient care. The student will be able to:
	31.01 Develop a working knowledge of the Substance Abuse and Mental Health Services Administration (SAMHSA) definition of recovery, to include the recovery process, stages of change and recovery capital.
	31.02 Develop a working knowledge of the holistic approach to recovery and wellness, which includes physical, mental, spiritual and social wellness.

CTE Standards and Benchmarks	
	31.03 Develop a basic understanding of the signs and symptoms of common mental health conditions, substance use disorders and co-occurring disorders.
	31.04 Explain the core principles of trauma-informed care and how to provide services that reflect trauma-informed care principles and strategies.
	31.05 Recognize and respect the individual's personal values, cultural and spiritual beliefs, and how these play a role in achieving whole-health goals.
	31.06 Write a clear and well-organized research paper on the psychological foundations of behavior and suicide prevention, incorporating information from sources such as: National Alliance on Mental Illness (NAMI), National Association for Behavioral Healthcare (NABH), National Institute of Mental Health (NIMH), National Suicide Prevention Lifeline, National Council for Mental Wellbeing, Autism Speaks.org, and WRAP (Wellness Recovery Action Plan).
	31.07 Demonstrate a working knowledge of relevant rights and laws to ensure the individual's rights are maintained.
	31.08 Develop and provide patient education and information on various resources and support groups available for the mentally ill, substance using or addictive patient, and family members.
	31.09 Demonstrate and understand the principles of the 12-step program model for recovery, the 12 steps and traditions, anonymity, key slogans, and use of sponsor.
	31.10 Demonstrate and discuss knowledge of local support groups, community mental health centers and developmental-disabled centers that provide support and assistance to patients and their families including AA (Alcoholics Anonymous), NA (Narcotics Anonymous), MARA (Medication Assisted Recovery Anonymous), and OA (Overeaters Anonymous).
	31.11 Conduct individual, group and family presentations and discussions to facilitate patient recovery and wellness, communicating clear goals, ground rules, expectations, and recognizing group dynamics and processes.
	31.12 Display awareness of demographics of group participants (gender, culture, age, socioeconomic status); awareness of participant's cognitive and developmental stages, readiness for education on subject and comprehension ability.
	31.13 Identify different kinds of human trafficking, including child trafficking, and steps taken to avoid unsafe situations and to prevent exploitation.
	31.14 Demonstrate and practice effective communication techniques (verbal and nonverbal) and use of possible role play, skits, handouts and creative supplements of content to be discussed or presented, assuring client safety and knowing possible "triggers".
32.0	Perform skills, examine, measure and interpret documentation related to direct care and recovery support system in various types of community and treatment settings as a member of a multidisciplinary team. The student will be able to:
	32.01 Orient individuals receiving services to the program.
	32.02 Conduct initial screenings or other interviews to inform assessments.
	32.03 Participate as a member of the individual's treatment team and assist in implementation of treatment plans.
	32.04 Directly observe and support or redirect behaviors of individual's receiving services.
	32.05 Document and communicate observations of individuals to the treatment team.

CTE Standards and Benchmarks	
	32.06 Teach activities of daily living, including self-care, budgeting, chores, daily schedules, etc.
	32.07 Construct a spreadsheet outlining the chain of command, multidisciplinary roles, and scope of practice of the multidisciplinary team at various treatment centers.
	32.08 Assess stress management and incorporate effective techniques in the recovery and rehabilitation process.
	32.09 Organize, supervise and/or encourage participation in social, educational, or recreational activities that enhance the individual's interpersonal skills and social relationships.
	32.10 Lead prescribed psychoeducational individual or group sessions as part of established procedures and in accord with the treatment plan.
	32.11 Demonstrate ability to function independently without constant supervision, showing respect for coworkers and following and interpreting the organizational chart.
	32.12 Engage and assist individuals to move through the recovery process and develop recovery capital.
	32.13 Assist and motivate individuals to access and successfully navigate the array of community resources and recovery support services available to achieve and maintain recovery.
	32.14 Maintain own proper physical, emotional, and mental health through application of proper body mechanics, use of healthy coping mechanisms, ability to have self- awareness skills and seek healthy support when necessary.
	32.15 Collaborate with other team members in proper application of patient assessment, planning, implementation and evaluation; functioning in various roles and capacities and promoting healthy interpersonal relationships.
	32.16 Relate unit problems and needs to the team leader; report violations of patients and assist in issuing consequences.
	32.17 Support hospital and residential policies and procedures as well as the procedure manual for the unit.
	32.18 Participate in the planning, decision-making through staff meetings and professional development.
33.0	Provide biological, psychological and social support in conflict resolution and safety techniques. The student will be able to:
	33.01 Discuss family roles, their significance to health, and the impact on their physical and mental status.
	33.02 Recognize and respond to conflicts using positive conflict resolution strategies.
	33.03 Recognize and respond to signs of potential crisis by using de-escalation techniques and/or other crisis prevention and intervention strategies.
	33.04 Monitor and maintain the environment of care to ensure safety of the individual, yourself and coworkers.
	33.05 Ensure quality patient care by developing good rapport while displaying empathy, respect, and nonjudgmental attitude towards the patient’s needs.
	33.06 Respond to patient and family emotional needs.
	33.07 Articulate and portray knowledge of multicultural considerations while communicating with patients, families, and staff.

CTE Standards and Benchmarks	
	33.08 Provide positive feedback for acceptable behaviors while reinforcing that others care.
	33.09 Cultivate simple, clear and direct communication techniques, which enable an effective exchange of information, ideas, feelings, and trust.
	33.10 Investigate and analyze causes of mass shootings in schools and how they can be prevented.
	33.11 Design a video, film or presentation explaining and/or illustrating the risks of vaping, marijuana, opioid, prescription drug misuse, alcohol consumption, drug addiction and the physical effects on the human body.
	33.12 Compare and contrast between direct and open-ended questioning, verbal and non-verbal cues, therapeutic communication techniques vs. nontherapeutic communication blocks, and effective vs. non-effective communication techniques.
34.0	Practice and perform duties, demonstrating professional responsibility and scope of practice. The student will be able to:
	34.01 Maintain confidentiality in accordance with federal and state laws.
	34.02 Document services in accordance with agency policy and procedure.
	34.03 Perform all duties in accordance with federal, state, and local laws, rules and regulations.
	34.04 Perform all duties in accordance with published codes of ethics, professional conduct and scope of service.
	34.05 Provide services without discrimination or preference based on age, ethnicity, culture, race, disability, gender identify, religion, sexual orientation or socio-economic status.
	34.06 Understand, compare and contrast the scope of practice for psychiatric technicians including behavioral health technicians and mental health technicians.
	34.07 Seek and follow supervisory guidance as necessary and appropriate to completely perform assigned duties.
	34.08 Demonstrate a working knowledge of and use personal safety and self-care strategies.
	34.09 Identify and apply steps to minimize the harmful effects of stereotypes and the stigma associated with mental illness.
	34.10 Compare and contrast the scope of practice for healthcare support workers, health technologists and technicians, community health workers, mental health counselors, healthcare social workers, substance abuse and behavioral disorder counselors, and mental health and substance abuse social workers.
	34.11 Produce an informational flyer directed toward secondary students recommending resources to help mental health in schools.
	34.12 Explore and evaluate behavioral health careers including careers in administration, education, human services, counseling, casework, rehabilitation, coordination, and crisis intervention.
	34.13 Establish and maintain a professional atmosphere for a safe and therapeutic environment, including respect for appropriate boundaries, use of touch, distance zones, setting consistent limits especially with manipulative behavior, and reporting violations and exploitive behaviors.

CTE Standards and Benchmarks	
	34.14 Categorize intellectual developmental disabilities and their impact on the nervous system, sensory system, metabolism, development, and degenerative disorders.
	34.15 Teach patients, incorporating relevant and up-to-date educational information to ensure comprehension of assessment tools, wellness and disease concepts, causes of diseases and disorders, and interventions in behavioral health.
	34.16 Participate in ongoing professional educational activities to enhance practice knowledge and work performance.
35.0	Demonstrate an understanding of various behavioral and mental health diseases and disorders, observable signs and symptoms, and general interventions. The student will be able to:
	35.01 Discuss observable signs and symptoms and demonstrate general interventions to be implemented for anxiety, bipolar, eating disorders, depression and suicide, neurodevelopmental disorders including autism spectrum disorder, and neurocognitive disorders including dementia.
	35.02 Discuss observable signs and symptoms and demonstrate general interventions to be implemented for Obsessive Compulsive Disorder (OCD), psychosis, schizophrenia, Alzheimer's disease**,** personality disorders, substance use and addictive disorders, and trauma and stressor related disorders.
	35.03 Investigate anatomical and physiological concepts and action of the prefrontal cortex in mastering habits and managing pain.
	35.04 Demonstrate knowledge of pharmacology treatment, side effects, and be able to identify the patient's adverse reactions.
	35.05 Examine and critique prevention programs including drug education programs, health and wellness programs, stress management, community campaigns, and parenting programs.
	35.06 Examine and evaluate drugs that can alter functions enabling focus, control impulses, form flexible plans, use social intelligence and maintain motivation: stimulants, anxiety drugs, sleeping drugs, antidepressants, bipolar disorder drugs, anti-craving drugs, pain regulation, reinforcement, mental control, and habit-forming drugs.
	35.07 Validate and demonstrate knowledge of various types of therapies and its applications: complementary therapy, integrative therapy, and electroconvulsive therapy.
	35.08 Identify and classify the spectrum of interventions and treatment for mental health problems and the types of delivery of care in the stabilization and rehabilitation of the mental health patient.
	35.09 Display knowledge and explain the process of recovery and relapse prevention.
	35.10 Integrate knowledge of early intervention programs and their applications.
	35.11 Categorize and display knowledge of Individual therapy, group therapy, cognitive behavioral therapy, family therapy, education groups, support groups, and self-help groups.
	35.12 Design a case scenario modeling the differences between an involuntary and voluntary admission.
	35.13 Apply and integrate knowledge of different types of treatment and support including: long term care facilities, residential facilities, clinics, mobile outreach units, partial hospitalization programs, community health centers and developmental disability centers, and inpatient hospitalization (crisis intervention, detoxification, stabilization and case management).
36.0	Perform skills and provide documentation related to caring for and supervising the mental health patient in various types of treatment settings. The student will be able to:

CTE Standards and Benchmarks	
36.01	Apply legal and ethical concepts in decision making and examine safety and security issues to protect the patient.
36.02	Demonstrate HIPAA, confidentiality, legal, and ethical considerations while caring for the mental health patient.
36.03	Analyze and synthesize information from multiple sources comparing and contrasting neurological and psychological applications.
36.04	Demonstrate correct documentation procedures and guidelines in regard to format, proper grammar and spelling, appropriate use of medical abbreviations, medical terminology, and types of charting and electronic medical records utilized at different facilities.
36.05	Conduct a project that requires application of statistical measurements and illustration of data concerning patient safety protocols.
36.06	Perform a verbal report and accurately communicate to the healthcare team leader changes in patient conditions, vital signs, mood, behavior and/or recent or unreported events.
36.07	Categorize and evaluate various assessment tools in behavioral health.
36.08	Optimize group therapy sessions applying effective therapeutic communication and stress management skills.
36.09	Provide safety and security measures for inpatient hospitalization including: crisis intervention, contraband check, room search, elopement precautions, frequent monitoring, suicide and homicide precautions.
36.10	Compare and contrast subjective and objective observations.
36.11	Demonstrate observation and documentation skills of patient's verbal and nonverbal communication, changes in thought processes, mood, and behavior.
36.12	Practice and apply knowledge of infection control and blood borne pathogens on the mental health unit and while caring for the mental health patient.
36.13	Provide safety and security measures for outpatient and residential facilities and display knowledge of outpatient emergency procedures.
36.14	Assess, assist, and document patient's vital signs, ADL's (activities of daily living: hygiene, bathing, dressing, nutrition and elimination); group attendance, and interactions with staff, patients, and visitors.
36.15	Recognize and report signs of child abuse and neglect, domestic violence, and human trafficking; compare most recent state and federal laws and interpret findings.
36.16	Demonstrate practical skills in First Aid and CPR, HIV/AIDS and Bloodborne Pathogens, Safety, Ethics, Confidentiality and Patient's Rights.
36.17	Demonstrate the ability to observe and document physical signs and symptoms of patient responses to medications, drug use or change in condition and change in vital signs.
36.18	Verify and chart events accurately, writing appropriate time, sequence, and place.
36.19	Participate and demonstrate competency in mandatory abuse reporting, verbal de-escalation techniques, identification and treatment of substance abuse and mental health disorders, basic psychopharmacology and side effects of medications, and clinical risk and client competency assessments.
36.20	Collaborate with members of a healthcare team in the clinical setting to coordinate and provide patient care.

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as, experimental, quality, and safety procedures are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate and troubleshoot equipment/tools used to make observations. Students understand measurement error; and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

Florida Standards for English Language Development (ELD)

English language learners communicate for social and instructional purposes within the school setting. ELD.K12.ELL.SI.1

English Language Development (ELD) Standards Special Notes:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. For additional information on the development and implementation of the ELD standards, please contact the Bureau of Student Achievement through Language Acquisition at SALA@fldoe.org.

Special Notes

Following the completion of the Health Science Core, the student is eligible to take the National Health Care Foundation Skill Standards Assessment with instructor approval and the completion of a portfolio.

This program meets the Department of Health's education requirements for HIV/AIDS, Domestic Violence and Prevention of Medical Errors. Although not a requirement for initial licensure, it is a requirement for renewal, therefore the instructor **may** provide a certificate for renewal purposes to the student verifying these requirements have been met.

This program requires a clinical component of approximately 50% the length of the course following the health science core. A portion of the clinical experience can be achieved through simulation when appropriate.

Upon successful completion of the program, students may seek certification as a Certified Behavioral Health Technician (CBHT) through The Florida Certification Board (FCB). Please refer to the FCB for requirements, policies, and procedures at https://flcertificationboard.org/

In addition, program completers may seek certification as a Certified Community Health Worker and Certified Healthcare Support Specialist through certification boards and agencies offering the industry certifications.

Career and Technical Student Organization (CTSO)

CTSOs are co-curricular career and technical student organizations providing leadership training and reinforcing specific career and technical skills. Career and Technical Student Organizations provide activities for students as an integral part of the instruction offered. Other CTSOs not listed in this curriculum framework or recognized by the Florida Department of Education are permissible provided they support student mastery over the standards and benchmarks of this curriculum framework.

Cooperative Training – OJT

On-the-job training is appropriate but not required for this program. Whenever offered, the rules, guidelines, and requirements specified in the OJT framework apply.

Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities as identified on the secondary student's Individual Educational Plan (IEP) or 504 plan or postsecondary student's accommodations' plan to meet individual needs and ensure equal access. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

In addition to accommodations, some secondary students with disabilities (students with an IEP served in Exceptional Student Education (ESE)) will need modifications to meet their needs. Modifications change the outcomes or what the student is expected to learn, e.g., modifying the curriculum of a secondary career and technical education course. Note: postsecondary curriculum and regulated secondary programs cannot be modified.

Some secondary students with disabilities (ESE) may need additional time (i.e., longer than the regular school year), to master the student performance standards associated with a regular course or a modified course. If needed, a student may enroll in the same career and technical course more than once. Documentation should be included in the IEP that clearly indicates that it is anticipated that the student may need an additional year to complete a Career and Technical Education (CTE) course. The student should work on different competencies and new applications of competencies each year toward completion of the CTE course. After achieving the competencies identified for the year, the student earns credit for the course. It is important to ensure that credits earned by students are reported accurately. The district's information system must be designed to accept multiple credits for the same course number for eligible students with disabilities.

Florida Department of Education
Curriculum Framework

The standards and/or benchmarks for this program were updated for the 2026-27 academic year.

Program Title: **Biomedical Sciences**
Program Type: **Non Career Preparatory**
Career Cluster: **Health Science**

Secondary – Non Career Preparatory	
Program Number	8708100
CIP Number	0326010201
Grade Level	9-12
Program Length	4 credits
Teacher Certification	Refer to the **Program Structure** section.
CTSO	HOSA
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml

Purpose

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Health Science career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of the Health Science career cluster.

The purpose of this program is to provide students with a foundation of knowledge and technically oriented experiences in the study and applications of biomedical sciences and the possibilities in the biomedical field.

The content includes but is not limited to the study of human body systems, medicine, health, key biological concepts, communication, transport of substances, locomotion, metabolic processes, defense, protection, research processes, engineering principles, and an introduction to bioinformatics. The program also includes the design and development of various medical interventions, including vascular stents, cochlear implants, and prosthetic limbs. In addition, students review the history of organ transplants and gene therapy, and stay updated on cutting-edge developments via current scientific literature.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Program Structure

Students complete the three foundation courses (8708110, 8708120, and 8708130) and the capstone course (8708140).

This program is a planned sequence of instruction totaling four credits.

To teach the courses listed below, instructors must hold at least one of the teacher certifications indicated for that course.

The following table illustrates the secondary program structure:

Course Number	Course Title	Teacher Certification	Length	Level	Graduation Requirement
8708110	Principles of the Biomedical Sciences	BIOLOGY 1 @2 REG NURSE 7 G MED PROF 7 G PARAMEDIC @7 7G LAB TECH @7 7G PLTW HEALTH 7G	1 credit	3	EQ
8708120	Human Body Systems		1 credit	3	EQ
8708130	Medical Interventions		1 credit	3	EQ
8708140	Biomedical Innovation		1 credit	3	CT

(Graduation Requirement Codes: CT= Career & Technical Education, EQ= Equally Rigorous Science, EC= Economics, MA= Mathematics, PL= Personal Financial Literacy)

Florida's Career Readiness Skills for CTE Programs

Employability Skills	
01.0	Apply academic skills to workplace scenarios.
01.01	Use reading skills.
01.02	Use writing skills.
01.03	Use mathematical strategies and procedures.
01.04	Use scientific principles and procedures.
02.0	Design a solution to an industry problem.
02.01	Use critical thinking.
02.02	Use creativity.
02.03	Make sound decisions.
02.04	Solve problems.
02.05	Reason.
02.06	Plan and organize.
03.0	Manage resources within an industry project
03.01	Manage time.
03.02	Manage money or resources.
03.03	Manage materials.
03.04	Manage personnel.
04.0	Oversee the subcomponents, operations and output of a technical or organizational system.
04.01	Manage systems.
04.02	Monitor systems.
04.03	Improve systems.
05.0	Use information for decision making.
05.01	Locate information.
05.02	Organize information.
05.03	Use information.

	05.04 Analyze information.
	05.05 Communicate information.
06.0	Apply relevant technology to workplace scenarios to aid productivity.
	06.01 Use technology.
07.0	Interpret and express interpersonal communication.
	07.01 Communicate verbally.
	07.02 Listen actively.
	07.03 Comprehend written material.
	07.04 Convey information in writing.
	07.05 Communicate nonverbally.
	07.06 Interpret nonverbal communication.
08.0	Interact with others to accomplish workplace goals.
	08.01 Collaborate with others in a team.
	08.02 Respond to customer needs.
	08.03 Exercise leadership.
	08.04 Negotiate to resolve conflict.
	08.05 Respect others.
09.0	Manage personal behavior to maximize productivity and professional growth.
	09.01 Demonstrate responsibility and self-discipline.
	09.02 Adapt and show flexibility.
	09.03 Work independently.
	09.04 Demonstrate a willingness to learn.
	09.05 Demonstrate integrity.
	09.06 Demonstrate professionalism.
	09.07 Take initiative.
	09.08 Display positive attitude.
	09.09 Take responsibility for professional growth.

Career Exploration & Planning	
10.0	Explain career opportunities aligned with the regional economy and personal aspirations.
10.01	Describe regional occupations that are high-demand, high-growth, high-wage and/or high-skill.
10.02	Describe careers aligned with his or her interests, skills and values based on career assessment, experiential learning, career informational interviews, research and/or reflection.
11.0	Explain postsecondary pathways aligned with his or her career aspirations.
11.01	Compare and contrast postsecondary pathways, including education, employment, entrepreneurship and enlistment (the “Four Es”).
11.02	Compare and contrast regional postsecondary training provider options, including apprenticeships, technical colleges, state colleges, universities and industry-recognized certification providers.
11.03	Define postsecondary credentialing and stacking options, including industry-recognized certifications, apprenticeship certificates of completion, career certificates, licenses and associate or baccalaureate degrees.
11.04	Compare postsecondary training data for training programs of interest, such as total costs, average student loan debt, and median earnings and job placement rates after program completion.
12.0	Develop a personalized career and academic plan.
12.01	Prioritize an occupation, credential and postsecondary training provider for plan formation.
12.02	Self-assess progress toward meeting graduation requirements and skill-development goals.
12.03	Develop and complete a chronological checklist of steps and deadlines prior to postsecondary training or national service application that includes any required documentation to gather, writing prompts and examinations.
12.04	Identify a variety of financial aid opportunities, including scholarships, grants, savings, work, work-study programs, private loans and federal loans.
12.05	Develop a postsecondary training budget that is inclusive of living and school expenses.
Job Attainment	
13.0	Find, assess and apply to job opportunities.
13.01	Identify online job posts relevant to his or her career aspirations.
13.02	Compare and contrast the job posts’ required qualifications, job duties, compensation, benefits and employers.
13.03	Define what information, documentation and writing prompts are required for the positions.
14.0	Communicate personal competence, character and fit for a job opportunity.
14.01	Develop a resume.
14.02	Write a cover letter.
14.03	Curate a professional portfolio that includes work products.
14.04	Prepare for and experience a mock job interview.

15.0	Cultivate and leverage relationships to professionally advance.
	15.01 Request a signed reference letter, letter of recommendation and/or an online skill/professionalism endorsement.
	15.02 Develop a plan to cultivate a professional digital footprint.
	15.03 Develop a networking plan for a specific industry of interest.

Standards

After successfully completing this program, the student will be able to perform the following:

Principles of the Biomedical Sciences

01.0 Demonstrate knowledge as a member of a forensic investigation team.
02.0 Explain the connection between structure and function in biology.
03.0 Describe how the systems of the body work together to maintain homeostasis.
04.0 Document patient information.
05.0 Explore aspects of emergency medicine and apply learning to hospitals and outbreaks.
06.0 Understand and describe the importance of blood in relation to the cardiovascular system and the human body.
07.0 Explain the role of DNA, RNA, and proteins in the inheritance of traits and the development of diseases or disorders.
08.0 Describe cell division and the process by which chromosomes replicate, leading to genetic diversity.
09.0 Analyze genetic information to predict patterns of inheritance.
10.0 Select and use appropriate tools, techniques, and/or technologies to analyze genetic information and diagnose disease.
11.0 Explain how the composition, structure, and activities of cells build functional systems in the human body.
12.0 Devise and execute a plan to solve a problem, using evidence to justify decisions.
13.0 Apply an iterative design process to creatively address a need or solve a problem.

Human Body Systems

14.0 Explain clinical tests that are used to diagnose malfunctioning organ systems.
15.0 Describe how imbalances in the body system can result in diseases.
16.0 Describe the structures and functions of the skeletal system.
17.0 Describe the structures and functions of the muscular system.
18.0 Describe the structures and functions of the integumentary system.
19.0 Describe the structures and functions of the cardiovascular system.
20.0 Describe the structures and functions of the nervous system.
21.0 Describe the structures and functions of the lymphatic and immune systems.
22.0 Describe the structures and functions of the respiratory system.
23.0 Describe the structures and functions of the endocrine system.
24.0 Describe the structures and functions of the digestive system.
25.0 Describe the structures and functions of the urinary system.
26.0 Describe the structures and functions of the reproductive system.

Medical Interventions

27.0 Investigate the variety of interventions involved in the prevention, diagnosis, and treatment of infectious diseases.
28.0 Explore the factors that contribute to the effectiveness of antibiotics against infectious diseases.
29.0 Investigate the pathology of hearing loss as a detrimental effect of infectious diseases.
30.0 Explore vaccination as a mode of infectious disease prevention.
31.0 Investigate the available types of genetic testing/screening and their ethical implications.

32.0 Examine the current reproductive and genetic technology and discuss the future of medical interventions.
33.0 Explore the diagnostic techniques and technology being used to better diagnose and understand cancer.
34.0 Explore the potential risk factors associated with cancer and the various situations that cause changes to DNA.
35.0 Investigate the treatments and therapies available to treat the physical, mental, and emotional effects of cancer.
36.0 Explore future medical interventions for cancer.
37.0 Explore the medical implications of proteins produced and purified in a laboratory setting.
38.0 Investigate the epidemiology and therapeutic interventions of kidney failure.
39.0 Explore the process, policies, and procedures involved in organ transplantation.
40.0 Investigate how advances in medical knowledge and technology can aid in building a better human body for the future.

Biomedical Innovation

41.0 Investigate biomedical problems related to clinical care by designing an effective emergency care center.
42.0 Explore the variety of research study designs available and investigate how to set up and conduct valid and reliable studies.
43.0 Explore the process, knowledge, and skills required to design a medical innovation.
44.0 Explore biomedical innovation through investigating water contamination.
45.0 Evaluate a public health issue and combat the problem using knowledge of epidemiology, disease diagnosis, and public health resources.
46.0 Understand medical research and the process of writing a scientific grant.
47.0 (Optional) Use modern molecular biology techniques to clone and transfer DNA.
48.0 (Optional) Assuming the role of a medical expert, investigate a mysterious death using forensic autopsy techniques.
49.0 (Optional) Students work independently in an area of interest in the biomedical sciences and outline milestones in a long-term, open-ended problem using skills learned throughout the program to complete the project.

Florida Department of Education
Student Performance Standards

Course Title: Principles of Biomedical Science
Course Number: 8708110
Course Credit: 1

Course Description:

Students investigate the human body systems and various health conditions. This course is designed to provide an overview of all the courses in the Biomedical Sciences program and lay the scientific foundation for subsequent courses. Students are introduced to human physiology, medicine, research processes, and bioinformatics. Key biological concepts, including homeostasis, metabolism, inheritance of traits, and defense against disease, are embedded in the curriculum. Engineering principles, including the design process, feedback loops, and the relationship of structure to function, are also incorporated.

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as experimental quality, and safety procedures will be an integral part of this course. Students will interact with materials and primary sources of data or with secondary sources of data to observe and understand the natural world. Students will develop an understanding of measurement error and develop the skills to aggregate, interpret, and present the data and resulting conclusions. Equipment and supplies will be provided to enhance these hands-on experiences for students. A minimum of 20% of classroom time will be dedicated to laboratory experiences.

CTE Standards and Benchmarks	
01.0	Demonstrate knowledge as a member of a forensic investigation team. The student will be able to:
01.01	Analyze forensic evidence to draw conclusions.
01.02	Analyze autopsy information to determine the cause of death.
02.0	Explain the connection between structure and function in biology. The student will be able to:
02.01	Describe the anatomy and physiology of key human body systems as well as the organization and interaction of these systems.
02.02	Understand that interactions between internal and external sources can affect body systems and cell functions.
02.03	Explain how organ anatomy (such as that of the heart or brain) is related to function.
02.04	Demonstrate how a change in structure in the body impacts function.
03.0	Describe how the systems of the body work together to maintain homeostasis. The student will be able to:
03.01	Cite examples of how body systems collaboratively function to maintain homeostasis and health.

CTE Standards and Benchmarks	
	03.02 Demonstrate how feedback loops help maintain homeostasis in the body.
	03.03 Create, describe, and analyze models of biological processes to explain proper and improper functioning.
04.0	Document patient information. The student will be able to:
	04.01 Use medical terminology to transcribe and communicate information, data, and observations.
	04.02 Maintain accurate patient records and demonstrate why this is important.
	04.03 Demonstrate adherence to HIPAA guidelines to maintain patient privacy.
05.0	Explore aspects of emergency medicine and apply learning to hospitals and outbreaks. The student will be able to:
	05.01 Using information about how our bodies fight disease, describe how infectious disease can be spread, treated, prevented, and controlled.
	05.02 Analyze evidence to trace the source of an infection, map the etiology of the disease, and stop the spread.
	05.03 Describe the steps of risk assessment at a medical emergency.
	05.04 Select the most appropriate route of delivery and dosage for a medication.
	05.05 Propose strategies for responding to disasters and large-scale health crises that involve effective crisis communication, bleeding and injury control, and measures for control of medical surge.
06.0	Understand and describe the importance of blood in relation to the cardiovascular system and the human body. The student will be able to:
	06.01 Explain that blood is a liquid connective tissue composed of erythrocytes, leukocytes, and thrombocytes that are suspended in liquid plasma.
	06.02 Compare and contrast the functions of erythrocytes, leukocytes, and thrombocytes.
	06.03 Recognize that blood is a major transport for many substances in the body that must be replenished throughout life, including hormones, gases, molecules, waste, and nutrients.
07.0	Explain the role of DNA, RNA, and proteins in the inheritance of traits and the development of diseases or disorders. The student will be able to:
	07.01 Describe the structure and function of nucleic acids and the relationship among genes, alleles, chromosomes, proteins, and traits.
	07.02 Explain how the order and chemical properties of amino acids influence a protein’s structure and function.
	07.03 Describe the processes of DNA replication and protein synthesis.
	07.04 Explain how mutations in nucleic acids can lead to diseases or disorders or promote evolutionary change.

CTE Standards and Benchmarks	
	07.05 Demonstrate how environmental factors can lead to genetic mutations.
08.0	Describe cell division and the process by which chromosomes replicate, leading to genetic diversity. The student will be able to:
	08.01 Differentiate between mitosis and meiosis and model how these processes lead to genetic diversity.
	08.02 Analyze karyotypes to diagnose chromosomal abnormalities.
09.0	Analyze genetic information to predict patterns of inheritance. The student will be able to:
	09.01 Predict the pattern of gene inheritance using Punnett squares.
	09.02 Predict the pattern of gene inheritance using pedigree analysis.
10.0	Select and use appropriate tools, techniques, and/or technologies to analyze genetic information and diagnose disease. The student will be able to:
	10.01 Explain and demonstrate techniques in molecular biology (DNA extraction, restriction digestion, gel electrophoresis) and interpret results.
	10.02 Utilize bioinformatics to analyze and compare genetic information.
11.0	Explain how the composition, structure, and activities of cells build functional systems in the human body. The student will be able to:
	11.01 Differentiate between prokaryotic and eukaryotic cells.
	11.02 Describe the relationship of cells, tissues, organs, and systems in the human body.
	11.03 Identify the structure and function of macromolecules that are used in the body.
	11.04 Demonstrate how the structure of the cell membrane impacts homeostasis.
	11.05 Interpret the interaction between cells and between cells and their environment.
12.0	Devise and execute a plan to solve a problem, using evidence to justify decisions. The student will be able to:
	12.01 Synthesize information from multiple credible sources, such as literature, databases, policy documents, and diverse perspectives from multiple disciplines, to explore causes and solutions to problems.
	12.02 Devise and execute a plan to solve a problem while considering the impacts of the possible solutions.
	12.03 Conduct research using credible resources to craft explanations and draw conclusions while acknowledging the limitations, opposing views, and biases.
13.0	Apply an iterative design process to creatively address a need or solve a problem. The student will be able to:
	13.01 Assess how design and innovation can help solve a problem in biomedical science.

CTE Standards and Benchmarks	
13.02	Identify and define visual, functional, and structural design requirements (criteria) and realistic constraints, against which solution alternatives can be evaluated and optimized.
13.03	Compare competing solution ideas and justify the selection of a solution path with respect to design requirements and constraints.
13.04	Develop a solution and implement a plan to test and evaluate a potential solution to verify that it meets all constraints and complies with all design criteria.

Florida Department of Education
Student Performance Standards

Course Title: Human Body Systems
Course Number: 8708120
Course Credit: 1

Course Description:

Students examine the interactions of body systems as they explore identity, communication, power, movement, protection, and homeostasis. Students design experiments, investigate the structures and functions of the human body, and use data acquisition software to monitor body functions such as muscle movement, reflex and voluntary action, and respiration. Exploring science in action, students build organs and tissues on a skeletal manikin, work through interesting real-world cases, and often play the role of biomedical professionals to solve medical mysteries.

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as experimental quality, and safety procedures will be an integral part of this course. Students will interact with materials and primary sources of data or with secondary sources of data to observe and understand the natural world. Students will develop an understanding of measurement error and develop the skills to aggregate, interpret, and present the data and resulting conclusions. Equipment and supplies will be provided to enhance these hands-on experiences for students. A minimum of 20% of classroom time will be dedicated to laboratory experiences.

CTE Standards and Benchmarks	
14.0	Explain clinical tests that are used to diagnose malfunctioning organ systems. The student will be able to:
14.01	Analyze spirometry data to determine tidal volume, vital capacity, and minute volume.
14.02	Analyze urinalysis results to diagnose disease and dysfunction in human body systems.
14.03	Measure peripheral pulses using Doppler ultrasound and calculate an ankle brachial index (ABI).
14.04	Use electrocardiography (EKG) to describe the conduction system of the heart and identify abnormal heart rhythms.
14.05	Interpret EMG data to assess muscle function.
14.06	Interpret X-rays to determine specific types of bone fractures.
15.0	Describe how imbalances in the body system can result in diseases. The student will be able to:
15.01	Explain how events can cause organ system dysfunction and lead to disease.
15.02	Describe and evaluate medical intervention strategies that can treat or cure diseases.

CTE Standards and Benchmarks	
	15.03 Explain how lifestyle choices can lead to disease.
	15.04 Analyze physical symptoms of a patient and relate these symptoms to errors in hormonal levels.
	15.05 Analyze how structural dysfunction of blood vessels impacts overall health.
	15.06 Interpret how a breakdown in communication in the central nervous system impacts the function of the human body.
16.0	Describe the structures and functions of the skeletal system. The student will be able to:
	16.01 Illustrate the structure, development, growth, and function of compact and spongy bone.
	16.02 Locate and identify individual bones and bone features.
	16.03 Describe the structure of the major types of joints and how these influence mobility and stability.
17.0	Describe the structures and functions of the muscular system. The student will be able to:
	17.01 Compare and contrast the structural and functional similarities and differences between skeletal, cardiac, and smooth muscle.
	17.02 Explain the processes involved in the sliding filament model and biochemical mechanisms that provide energy for muscle contraction and relaxation.
	17.03 Identify the major muscles on a diagram, model, or through dissection.
18.0	Describe the structures and functions of the integumentary system. The student will be able to:
	18.01 Analyze the structural characteristics and functional importance of the integumentary system.
	18.02 Investigate the consequences of injury and disease to the integumentary system.
19.0	Describe the structures and functions of the cardiovascular system. The student will be able to:
	19.01 Investigate the structures and functions of the cardiovascular system.
	19.02 Relate the structure and functions of the cardiovascular system to maintaining homeostasis.
	19.03 Analyze the functions of blood involved in maintaining homeostasis; including nutrient, gas, and waste exchange.
20.0	Describe the structures and functions of the nervous system. The student will be able to:
	20.01 Investigate the structural and functional components of the nervous system.
	20.02 Describe the structures and the basic functions of different types of neurons.

CTE Standards and Benchmarks	
	20.03 Identify and model how action potentials are generated, the ions and channel proteins involved, and the basic structural and functional aspects which allow for synaptic connection.
	20.04 Explore the anatomy of the eye, its functional layers, and its function.
21.0	Describe the structures and functions of the lymphatic and immune systems. The student will be able to:
	21.01 Identify the structures and functions of the lymphatic and immune system.
	21.02 Understand that pathogens are agents of disease and possess identifying surface structures called antigens.
	21.03 Investigate the differences between innate and acquired immunity and explain how these types of immunity defend against infection.
	21.04 Describe how the immune system responds when an antigen enters the body.
	21.05 Describe immune-based prevention of and treatment for various infectious agents.
22.0	Describe the structures and functions of the respiratory system. The student will be able to:
	22.01 Identify and locate major organs of the respiratory system and describe their functions.
	22.02 Investigate lung volume and assess the impacts of varying capacities.
23.0	Describe the structures and functions of the endocrine system. The student will be able to:
	23.01 Investigate the structure and function of the endocrine system.
	23.02 Demonstrate how changes in hormone levels impact homeostasis throughout the body systems.
	23.03 Discuss the structural and functional differences between an endocrine gland and an exocrine gland.
	23.04 Describe the relationship between the endocrine and exocrine functions of the pancreas and digestion and blood sugar regulation.
24.0	Describe the structures and functions of the digestive system. The student will be able to:
	24.01 Identify and locate the organs of the digestive system and describe their functions.
	24.02 Investigate the identity and function of enzymes of the digestive system.
	24.03 Explain how the microbiome of the gut plays important roles in the body.
25.0	Describe the structures and functions of the urinary system. The student will be able to:
	25.01 Identify and locate organs of the urinary system and discuss their functions.

CTE Standards and Benchmarks	
	25.02 Describe the function of the kidneys in maintaining homeostasis of bodily fluids and blood pressure.
	25.03 Illustrate the nephron showing its structural components and the functional processes of filtration, secretion, and reabsorption.
	25.04 Investigate how the kidneys respond to excess water intake and to dehydration.
26.0	Describe the structures and functions of the reproductive system. The student will be able to:
	26.01 Identify and locate major and accessory organs of the female and male reproductive systems and discuss their functions.
	26.02 Discuss the role of hormones in the reproductive system.

Florida Department of Education
Student Performance Standards

Course Title: **Medical Interventions**
Course Number: **8708130**
Course Credit: **1**

Course Description:

Students investigate the variety of interventions involved in the prevention, diagnosis and treatment of disease as they follow the lives of a fictitious family. The course is a "How-To" manual for maintaining overall health and homeostasis in the body as students explore: how to prevent and fight infection; how to screen and evaluate the code in human DNA; how to prevent, diagnose and treat cancer; and how to prevail when the organs of the body begin to fail. Through these scenarios, students are exposed to the wide range of interventions related to immunology, surgery, genetics, pharmacology, medical devices, and diagnostics.

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as, experimental quality, and safety procedures will be an integral part of this course. Students will interact with materials and primary sources of data or with secondary sources of data to observe and understand the natural world. Students will develop an understanding of measurement error, and develop the skills to aggregate, interpret, and present the data and resulting conclusions. Equipment and supplies will be provided to enhance these hands-on experiences for students. A minimum of 20% of classroom time will be dedicated to laboratory experiences.

CTE Standards and Benchmarks	
27.0	Investigate the variety of interventions involved in the prevention, diagnosis, and treatment of infectious diseases. The student will be able to:
27.01	Research various medical interventions and explain how these interventions help prevent, diagnose, and treat disease.
27.02	Define bioinformatics and explore how it is used in the collection, classification, storage, and analysis of biochemical and biological information.
27.03	Explain how bacteria can be identified using DNA sequencing.
27.04	Investigate the roles of diagnostic tests for infectious diseases.
27.05	Graphically organize connections between individuals in a fictitious disease outbreak.
27.06	Determine the concentration of infectious bacteria in simulated body fluids and identify infected patients using antibody-based diagnostic tests, such as ELISA assay.
28.0	Explore the factors that contribute to the effectiveness of antibiotics against infectious diseases. The student will be able to:
28.01	Analyze and describe the structure of a bacterial cell.
28.02	Investigate how antibiotics disrupt the physiological pathways that bacteria need to survive.

CTE Standards and Benchmarks	
	28.03 Explain how bacteria use adaptations to gain resistance to antibiotics.
	28.04 Demonstrate one of the pathways through which bacterial cells transfer genes.
	28.05 Use a model to simulate the effects of antibiotics on the population of bacteria during an infection.
29.0	Investigate the pathology of hearing loss as a detrimental effect of infectious diseases. The student will be able to:
	29.01 Distinguish the properties of sound waves; including frequency and amplitude.
	29.02 Explain the anatomy of the ear and create a model of the ear demonstrating how its structure relates to its function.
	29.03 Identify diagnostic tests that assess and evaluate hearing loss.
	• Perform diagnostic tests to asses and evaluate hearing loss.
	29.04 Research interventions and services available to aide those with hearing loss.
	29.05 Investigate and debate the bioethical concerns related to the use of cochlear implant technology.
30.0	Explore vaccination as a mode of infectious disease prevention. The student will be able to:
	30.01 Explain how vaccines act as medical interventions to defend the body against infectious invaders.
	30.02 Explore laboratory methods in which vaccines are produced.
	30.03 Describe the structure and function of plasmids and explain their significance in genetic engineering.
	30.04 Investigate the importance of epidemiologists and their impact on public health.
	30.05 Describe how vaccines interact with the human immune system.
	30.06 Interpret data from a disease outbreak to determine the course of the infection.
	30.07 Explore general perspectives on the use of vaccinations.
31.0	Investigate the available types of genetic testing/screening and their ethical implications. The student will be able to:
	31.01 Describe genetic testing and how it is used to determine if someone has a genetic disorder.
	31.02 Explain how genetic counseling impacts a patient’s health outcome.
	31.03 Amplify a segment of DNA in the laboratory using the Polymerase Chain Reaction (PCR) procedure.

CTE Standards and Benchmarks	
	31.04 Use laboratory techniques such as DNA extraction, PCR, and restriction analysis to identify single base pair differences in DNA.
	31.05 Utilize laboratory results to analyze the relationship between genotype and phenotype.
	31.06 Analyze prenatal genetic screening results.
	31.07 Describe the basics of proper prenatal care as well as specified medical interventions used to monitor a pregnancy.
	31.08 Investigate how a person's ability to taste the chemical PCT, their phenotype, relates to their results from laboratory genetic testing their genotype.
32.0	Examine the current reproductive and genetic technology and discuss the future of medical interventions. The student will be able to:
	32.01 Explore how gene therapy can be used to treat genetic disorders.
	32.02 Discuss and debate the safety and effectiveness of gene therapy.
	32.03 Explore the various medical interventions parents have available to choose the sex of their future child, including sperm sorting and embryo selection by pre-implantation genetic diagnosis (PDG).
	32.04 Discuss the possibility of reproductive cloning and the ethical concerns.
	32.05 Evaluate and debate the potential impact of reproductive technology from moral, ethical, and scientific perspectives.
33.0	Explore the diagnostic techniques and technology being used to better diagnose and understand cancer. The student will be able to:
	33.01 Investigate the physiology of cancer and discuss how cancerous cells differ from healthy cells.
	33.02 Describe the different uses of x-rays, CT scans, and MRI scans.
	33.03 Investigate what DNA microarrays measure and how this information is used to determine differences in gene expression between differing tissues samples.
	33.04 Using statistical analysis, determine the similarities between gene expression patterns of multiple patients.
34.0	Explore the potential risk factors associated with cancer and the various situations that cause changes to DNA. The student will be able to:
	34.01 Describe the potential risk factors for different types of cancer as well as the ways to reduce the risk.
	34.02 Explore some of the various cancer screening techniques that can be used to predict risk for developing cancer.
	34.03 Investigate the risk factors of viruses and explain the role viruses' play as a risk factor for certain cancers.
35.0	Investigate the treatments and therapies available to treat the physical, mental, and emotional effects of cancer. The student will be able to:
	35.01 Identify the major differences between chemotherapy and radiation therapy.

CTE Standards and Benchmarks	
	35.02 Describe how chemotherapy drugs interact with and destroy cancer cells.
	35.03 Explore biofeedback therapy and how it is utilized to treat cancer and its symptoms.
	35.04 Synthesize designs that advances and benefit prosthetic technology for those who have lost their limbs.
	35.05 Explain how physical and occupational therapists help patients with disabilities and those recovering from surgery/injury.
36.0	Explore future medical interventions for cancer. The student will be able to:
	36.01 Discuss reasons why therapy drugs do not produce the same effect in all individuals.
	36.02 Explain how SNP profiles factor into the decision to prescribe a specific medication.
	36.03 Explore the field of pharmacogenetics and its contributions to the improvement of individualized patient treatment.
	36.04 Research and present how cases of misuse and abuse have led to strict regulations of human participation in clinical trials.
	36.05 Describe the importance of nanomedicine, particularly for cancer research and the development of medical interventions.
37.0	Explore the medical implications of proteins produced and purified in a laboratory setting. The student will be able to:
	37.01 Discuss the evolution of diagnosis and treatment of diabetes from the 1800s through today.
	37.02 Explain the various aspects of the bacterial transformation process.
	37.03 Define chromatography and how it is used to separate items in a mixture.
	37.04 Interpret electrophoresis results to determine the molecular weight of specific proteins in a mixture.
	37.05 Explore and discuss specific biomedical careers in the manufacturing of therapeutic proteins.
38.0	Investigate the epidemiology and therapeutic interventions of kidney failure. The student will be able to:
	38.01 Describe End Stage Renal Disease (ESRD) and how it is diagnosed.
	38.02 Describe the physiological effects on the body when kidneys do not function properly and its impact on the production of red blood cells.
	38.03 Explore the medical options for treatment for persons with ESRD including hemodialysis, peritoneal dialysis, and kidney transplant.
39.0	Explore the process, policies, and procedures involved in organ transplantation. The student will be able to:
	39.01 Discuss factors to consider when deciding who should receive an organ transplant.

CTE Standards and Benchmarks	
	39.02 Describe the importance of blood and tissue matching for a successful organ transplant.
	39.03 Describe the general steps involved in a live donor laparoscopic nephrectomy.
	39.04 Compare the major similarities and differences between a heart and a kidney transplant.
	39.05 Explain the most common ways members of the surgical transplant team work together to ensure a successful transplant.
40.0	Investigate how advances in medical knowledge and technology can aid in building a better human body for the future. The student will be able to:
	40.01 Explore how a variety of tissues and organs can be transplanted from one organism to another.
	40.02 Describe the general process of how xenotransplantation and tissue engineering works, as well as potential risks, benefits, challenges, and ethical/moral concerns.
	40.03 Reflect on how current methods of medical intervention can be improved.
	40.04 Describe how advancing medical knowledge and technology will enable scientists to delay the effects of aging and disease by enhancing the functions of the human body.
	40.05 Design a potential “super” human using knowledge of the human body and available medical interventions.

Florida Department of Education
Student Performance Standards

Course Title: **Biomedical Innovation**
Course Number: **8708140**
Course Credit: **1**

Course Description:

In this capstone course, students apply their knowledge and skills to answer questions or solve problems related to the biomedical sciences. Students design innovative solutions for the health challenges of the 21st century as they work through progressively challenging open-ended problems, addressing topics such as clinical medicine, physiology, biomedical engineering, and public health.

CTE Standards and Benchmarks	
41.0	Investigate biomedical problems related to clinical care by designing an effective emergency care center. The student will be able to:
41.01	Evaluate the role that biomedical innovation plays in treating disease, reducing wait time, and promoting efficient care in emergency room and emergency care centers.
41.02	Assess overall credibility of a website by analyzing its content.
41.03	Produce an effective presentation of scientific information by using oral communication skills and PowerPoint presentation.
41.04	Research and propose solutions to healthcare delivery problems in the 21st century.
41.05	Design an innovative emergency medicine delivery system.
41.06	Demonstrate proficiency in using online search engines and journal databases to locate scientific articles.
42.0	Explore the variety of research study designs available and investigate how to set up and conduct valid and reliable studies. The student will be able to:
42.01	Critique science data presented in popular media and compare this with data presented in scientific journals.
42.02	Analyze the results of experimental studies using knowledge of specified statistical analysis methods.
42.03	Design, conduct and analyze an experimental study to answer a question regarding one or more body systems.
42.04	Using at least three statistical fallacies, assume the role of an advertisement sales person selling a fictitious product.
42.05	Describe the various biomedical career fields related to clinical or research studies.
43.0	Explore the process, knowledge, and skills required to design a medical innovation. The student will be able to:

CTE Standards and Benchmarks	
	43.01 Investigate the evolution of biomedical products.
	43.02 Brainstorm ideas for a new biomedical product or methods to improve an existing product.
	43.03 Discuss the role of the scientific design process and how it is significant to medical innovation.
	43.04 Identify a problem related to the medical field and research the past and present solutions to this problem.
	43.05 Examine possible design solutions to the selected problem, determine the best approach and develop a design proposal.
	43.06 Design a marketing plan to pitch the chosen solution to potential investors.
44.0	Explore biomedical innovation through investigating water contamination. The student will be able to:
	44.01 List and describe multiple causes of water contamination.
	44.02 Explain why water quality is a global issue.
	44.03 Extrapolate on the cause of non-point source pollution and its implications.
	44.04 Using knowledge of specific assays, interpret the results of various chemical and culture assays and identify specific contaminants found.
	44.05 Research and propose solutions to prevent or treat water contamination.
	44.06 Determine local potential hazards or sources of contamination of local water samples and research local and Internet resources to investigate the condition of the local water delivery system.
	44.07 Research and report on the quality of the local water.
45.0	Evaluate a public health issue and combat the problem using knowledge of epidemiology, disease diagnosis, and public health resources. The student will be able to:
	45.01 Discuss the significant role that epidemiologists and public health investigators play in a public health crisis.
	45.02 Describe how to set-up case control and cohort studies.
	45.03 Discuss how measures of association are used to illustrate the correlation between specific risk factors and the development of disease.
	45.04 Calculate the measures of association used to assess risk in case control and cohort studies.
	45.05 List and discuss the various components that may be involved in a public health intervention plan.
	45.06 Determine the source of a mystery illness by examining evidence documents and data including laboratory results, imaging results, disease maps, and molecular data.

CTE Standards and Benchmarks	
	45.07 Research local, national, and global health issues and analyze how culture, geographic location, and access to health care affect health and wellness.
	45.08 Write a grant proposal outlining an intervention plan for a particular public health issue.
	45.09 Present and defend the proposed intervention plan to a professional audience.
46.0	Understand medical research and the process of writing a scientific grant. The student will be able to:
	46.01 Define and elaborate on what medical research is used for and how funding for it is obtained.
	46.02 Explain the role of a grant in relation to medical research.
	46.03 Understand the difference between what constitutes a credible source opposed to a non-credible source when conducting a literature search.
	46.04 Distinguish between primary and secondary sources.
	46.05 Discuss potential bias based on construct and funding sources of research.
	46.06 Discuss the role of an IRB in ensuring safety of a research project prior to data initiation.
	46.07 Understand and identify the process by which a grant is created and the principle components that are included in scientific grant proposals (i.e. abstract, specific aims, background and significance, preliminary data/progress, project description, resources, supplemental materials).
	46.08 Prepare and present a detailed grant proposal for a research project that will impact a specific aspect of a disease or medical condition.
47.0	(Optional) Use modern molecular biology techniques to clone and transfer DNA. The student will be able to:
	47.01 Explain the structure and function of plasmids and how they are used in genetic engineering.
	47.02 Describe the role restriction enzymes and how they interact with plasmids.
	47.03 Interpret plasmid maps to determine the results of specific digestions with restriction enzymes.
	47.04 Explain how to assemble recombinant DNA and clone a gene of interest using bacterial cells.
	47.05 Interpret gel electrophoresis results to determine the success of a cloning experiment.
	47.06 Using the process of bacterial transformation, insert a new plasmid into bacterial cells.
	47.07 Draw and label possible ligation products and describe digestion results for each product.
48.0	(Optional) Assuming the role of a medical expert, investigate a mysterious death using forensic autopsy techniques. The student will be able to:

CTE Standards and Benchmarks	
	48.01 Describe observations of the internal and external anatomy of a fetal pig.
	48.02 Evaluate a fetal pig for any abnormalities that may have led to the pig's death.
	48.03 Complete an autopsy report for the fetal pig.
	48.04 Solve the cause of death for a fetal pig by assuming the role of a forensic pathologist.
	48.05 Design a fictitious death scenario using knowledge of the human body.
	48.06 Create fictitious documents including an autopsy report and medical history to illustrate clues left behind in a dead body.
	48.07 Research and reflect on the various biomedical careers involved in forensic pathology and describe two of these careers in detail.
49.0	(Optional) Students work independently in an area of interest in the biomedical sciences and outline milestones in a long-term, open-ended problem using skills learned throughout the program to complete the project. The student will be able to:
	49.01 Choose a topic and describe work previously completed pertaining to that topic.
	49.02 Interpret charts, graphs, data sets, and any other information related to the project.
	49.03 Utilize time and project management skills to complete the approved project in the time allotted.
	49.04 Apply skills and knowledge of researching a topic, evaluating information, and decision making in order to complete the project.
	49.05 Write a well-constructed final report describing the purpose, procedures, and results of the project and present this information orally.
	49.06 Write a self-analysis of what was learned during the project with a focus on whether things should have been done differently or not.
	49.07 Prepare a portfolio of all artifacts related to the project in order to demonstrate the work progression.

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as, experimental, quality, and safety procedures are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate and troubleshoot equipment/tools used to make observations. Students understand measurement error; and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

Florida Standards for English Language Development (ELD)

English language learners communicate for social and instructional purposes within the school setting. ELD.K12.ELL.SI.1

English Language Development (ELD) Standards Special Notes:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. For additional information on the development and implementation of the ELD standards, please contact the Bureau of Student Achievement through Language Acquisition at sala@fldoe.org .

Special Notes

This program uses a combination of activity-based, project-based and problem-based (APPB) learning styles to engage students.

Hands-on projects include designing experiments, investigating the structures and functions of body systems, and using data acquisition software to monitor body functions such as muscle movement, reflex and voluntary actions, and respiratory operation. Using 3D imaging, data acquisition software, and current scientific research, students design a product that can be used as a medical intervention.

The capstone course gives student teams the opportunity to work with a mentor, identify a scientific research topic, conduct research, write a scientific paper, and defend team conclusions and recommendations to a panel of outside reviewers.

Career and Technical Student Organization (CTSO)

CTSOs are co-curricular career and technical student organizations providing leadership training and reinforcing specific career and technical skills. Career and Technical Student Organizations provide activities for students as an integral part of the instruction offered. Other CTSOs not listed in this curriculum framework or recognized by the Florida Department of Education are permissible provided they support student mastery over the standards and benchmarks of this curriculum framework.

Cooperative Training – OJT

On-the-job training is appropriate but not required for this program. Whenever offered, the rules, guidelines, and requirements specified in the OJT framework apply.

Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities as identified on the secondary student's Individual Educational Plan (IEP) or 504 plan or postsecondary student's accommodations' plan to meet individual needs and ensure equal access. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

In addition to accommodations, some secondary students with disabilities (students with an IEP served in Exceptional Student Education (ESE)) will need modifications to meet their needs. Modifications change the outcomes or what the student is expected to learn, e.g., modifying the curriculum of a secondary career and technical education course. Note: postsecondary curriculum and regulated secondary programs cannot be modified.

Some secondary students with disabilities (ESE) may need additional time (i.e., longer than the regular school year), to master the student performance standards associated with a regular course or a modified course. If needed, a student may enroll in the same career and technical course more than once. Documentation should be included in the IEP that clearly indicates that it is anticipated that the student may need an additional year to complete a Career and Technical Education (CTE) course. The student should work on different competencies and new applications of competencies each year toward completion of the CTE course. After achieving the competencies identified for the year, the student earns credit for the course. It is important to ensure that credits earned by students are reported accurately. The district's information system must be designed to accept multiple credits for the same course number for eligible students with disabilities.

Florida Department of Education
Curriculum Framework

Course Title: **Introduction to Health Science Career Pathways**
Course Type: **Orientation/Exploratory**
Career Cluster: **Health Science**

Secondary – Middle School	
Course Number	8709350
CIP Number	148709350M
Grade Level	6-8
Course Length	Semester
Teacher Certification	Refer to the **Course Structure** section.
CTSO	HOSA
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml

Purpose

The purpose of this course is to assist students in making informed decisions regarding their future academic and occupational goals and to provide information regarding careers in the Health Science career cluster.

The content includes but is not limited to a broad overview of the Health Science career cluster, including terminology, careers, history, required skills, and technologies associated with each pathway in the Health Science career cluster.

Instruction and learning activities are provided in a laboratory setting using hands-on experiences with the equipment, materials and technology appropriate to the course content and in accordance with current practices.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Course Structure

This program is a planned sequence of instruction consisting of 1 course.

The length of this course is one semester. It may be offered for two semesters when appropriate. When offered for one semester, it is recommended that it be at the exploratory level and more in-depth when offered for two semesters.

To teach the course listed below, instructors must hold at least one of the teacher certifications indicated for that course.

The following table illustrates the course/program structure:

Course Number	Course Title	Teacher Certification	Length
8709350	Introduction to Health Science Career Pathways	ANY HEALTH OCCUP G * (See DOE approved list)	Semester

Standards

After successfully completing this program, the student will be able to perform the following:

01.0 Demonstrate an understanding of the Therapeutic Services career pathway.
02.0 Demonstrate an understanding of the Diagnostic Services career pathway.
03.0 Demonstrate an understanding of the Health Informatics career pathway.
04.0 Demonstrate an understanding of the Support Services career pathway.
05.0 Demonstrate an understanding of the Biotechnology Research and Development career pathway.
06.0 Apply leadership and communication skills.

Florida Department of Education
Student Performance Standards

Course Title: **Introduction to Health Science Career Pathways**
Course Number: **8709350**
Course Length: **Semester**

Course Description:

Beginning with a broad overview of the Health Science career cluster, students are introduced to the terminology, careers, history, required skills, and technologies associated with each pathway in the Health Science career cluster. Additionally, they will be provided with opportunities to acquire and demonstrate beginning leadership skills.

CTE Standards and Benchmarks	
01.0	Demonstrate an understanding of the Therapeutic Services career pathway. The student will be able to:
01.01	Define and use proper terminology associated with the Therapeutic Services career pathway.
01.02	Explore a variety of careers in the Therapeutic Services career pathway, including educational requirements and salary expectations, such as EMS; Nursing; Dentistry; Pharmacy; Sports Medicine.
01.03	Identify common characteristics of the careers in the Therapeutic Services pathway.
01.04	Identify skills and equipment used in Therapeutic Service careers.
01.05	Perform lab activities that are relevant to each career that is being explored.
02.0	Demonstrate an understanding of the Diagnostic Services career pathway. The student will be able to:
02.01	Define and use proper terminology associated with the Diagnostic Services career pathway.
02.02	Explore a variety of careers in the Diagnostic Services career pathway. Suggested careers to focus on: Medical Laboratory Services; Radiology; Ophthalmology.
02.03	Identify common characteristics of the careers in the Diagnostic Services career pathway.
02.04	Identify skills required to successfully enter any career in the Diagnostic Services career pathway.
02.05	Perform lab activities related to careers being explored for example blood glucose testing, blood typing, and vision testing.
03.0	Demonstrate an understanding of the Health Informatics career pathway. The student will be able to:
03.01	Define and use proper terminology associated with the Health Informatics career pathway.

CTE Standards and Benchmarks	
	03.02 Explore a variety of careers in the Health Informatics career pathway.
	03.03 Explore the careers available in the Health Informatics; Medical Coding/Biller; Medical Office Administration.
	03.04 Identify common characteristics of the careers in the Health Informatics career pathway.
	03.05 Identify skills required to successfully enter any career in the Health Informatics career pathway.
	03.06 Perform activities related to health informatics careers such as evaluating medical records or bills, office reception and support.
04.0	Demonstrate an understanding of the Support Services career pathway. The student will be able to:
	04.01 Define and use proper terminology associated with the Support Services career pathway.
	04.02 Explore a variety of careers in the Support Services career pathway. Suggested careers: dietary services; central supply; social services; environmental services
	04.03 Identify common characteristics of the careers in the Support Services career pathway.
	04.04 Identify skills required to successfully enter any career in the Support Services career pathway.
	04.05 Perform lab skills related to covered careers such as diet plan design and housekeeping skills.
05.0	Demonstrate an understanding of the Biotechnology Research and Development career pathway. The student will be able to:
	05.01 Define and use proper terminology associated with the Biotechnology Research and Development career pathway.
	05.02 Explore a variety of careers in the Biotechnology Research and Development career pathway. Suggested careers: Biomedical Engineering and Biomedical Research.
	05.03 Identify skills required to successfully enter any career in the Biotechnology Research and Development career pathway.
	05.04 Perform lab skills related to covered career, for example: microbiology labs; investigating antisepsis procedures; DNA extraction lab.
	05.05 Explore the role of research in medical advancements and discoveries that promote wellness for example development of vaccines and discovery of the structure of DNA.
06.0	Apply leadership and communication skills. The student will be able to:
	06.01 Increase awareness of leadership opportunities through professional organizations such as Career Technical Student Organizations (CTSOs).
	06.02 Identify the characteristics of effective leadership.
	06.03 Demonstrate effective communication skills.

CTE Standards and Benchmarks
06.04 Demonstrate an understanding of how information technology is used in health care.

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as, experimental, quality, and safety procedures are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate and troubleshoot equipment/tools used to make observations. Students understand measurement error; and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

Florida Standards for English Language Development (ELD)

English language learners communicate for social and instructional purposes within the school setting. ELD.K12.ELL.SI.1

English Language Development (ELD) Standards Special Notes:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. For additional information on the development and implementation of the ELD standards, please contact the Bureau of Student Achievement through Language Acquisition at SALA@fldoe.org.

Special Notes

The intended progression for the Health Science Middle School courses is Introduction to Health Science Career Pathways (8709350 & 8709360), Orientation to Health Science Professions (8400110) and Exploration of Health Science Professions (8400310 & 8400210). By offering the middle school courses in the intended progression, each course increases in complexity, rigor and skill level as appropriate.

Career and Technical Student Organization (CTSO)

CTSOs are co-curricular career and technical student organizations providing leadership training and reinforcing specific career and technical skills. Career and Technical Student Organizations provide activities for students as an integral part of the instruction offered. Other CTSOs not listed in this curriculum framework or recognized by the Florida Department of Education are permissible provided they support student mastery over the standards and benchmarks of this curriculum framework.

Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities as identified on the secondary student's Individual Educational Plan (IEP) or 504 plan or postsecondary student's accommodations' plan to meet individual needs and ensure equal access. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional

methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

In addition to accommodations, some secondary students with disabilities (students with an IEP served in Exceptional Student Education (ESE)) will need modifications to meet their needs. Modifications change the outcomes or what the student is expected to learn, e.g., modifying the curriculum of a secondary career and technical education course. Note: postsecondary curriculum and regulated secondary programs cannot be modified.

Florida Department of Education
Curriculum Framework

Course Title: **Introduction to Health Science Career Pathways and Career Planning**
Course Type: **Orientation/Exploratory and Career Planning**
Career Cluster: **Health Science**

Secondary – Middle School	
Course Number	8709360
CIP Number	148709360M
Grade Level	6-8
Course Length	Semester
Teacher Certification	Refer to the **Course Structure** section.
CTSO	HOSA
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml

Purpose

The purpose of this course is to assist students in making informed decisions regarding their future academic and occupational goals and to provide information regarding careers in the Health Science career cluster. The content includes but is not limited to a broad overview of the Health Science career cluster, including terminology, careers, history, required skills, and technologies associated with each pathway in the Health Science career cluster.

Instruction and learning activities are provided in a laboratory setting using hands-on experiences with the equipment, materials and technology appropriate to the course content and in accordance with current practices.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Course Structure

This program is a planned sequence of instruction consisting of 1 course.

The length of this course is one semester. It may be offered for two semesters when appropriate. When offered for one semester, it is recommended that it be at the exploratory level and more in-depth when offered for two semesters.

To teach the course listed below, instructors must hold at least one of the teacher certifications indicated for that course.

The following table illustrates the course/program structure:

Course Number	Course Title	Teacher Certification	Length
8709360	Introduction to Health Science Career Pathways and Career Planning	ANY HEALTH OCCUP G * (See DOE approved list)	Semester

Standards

After successfully completing this program, the student will be able to perform the following:

01.0 Demonstrate an understanding of the Therapeutic Services career pathway.
02.0 Demonstrate an understanding of the Diagnostic Services career pathway.
03.0 Demonstrate an understanding of the Health Informatics career pathway.
04.0 Demonstrate an understanding of the Support Services career pathway.
05.0 Demonstrate an understanding of the Biotechnology Research and Development career pathway.
06.0 Apply leadership and communication skills.

Career and Education Planning [these must be met to satisfy the requirements of Section 1003.4156, Florida Statutes]

07.0 Explain his or her career interests, skills and values.
08.0 Describe occupations and industries in his or her region.
09.0 Describe a variety of postsecondary pathways.
10.0 Create a personalized career and academic plan.

Florida Department of Education
Student Performance Standards

Course Title: **Introduction to Health Science Career Pathways and Career Planning**
Course Number: **8709360**
Course Length: **Semester**

Course Description:

Beginning with a broad overview of the Health Science career cluster, students are introduced to the terminology, careers, history, required skills, and technologies associated with each pathway in the Health Science career cluster. Additionally, they will be provided with opportunities to acquire and demonstrate beginning leadership skills.

CTE Standards and Benchmarks	
01.0	Demonstrate an understanding of the Therapeutic Services career pathway. The student will be able to:
01.01	Define and use proper terminology associated with the Therapeutic Services career pathway.
01.02	Explore a variety of careers in the Therapeutic Services career pathway, including educational requirements and salary expectations, such as EMS; Nursing; Dentistry; Pharmacy; Sports Medicine.
01.03	Identify common characteristics of the careers in the Therapeutic Services pathway.
01.04	Identify skills and equipment used in Therapeutic Service careers.
01.05	Perform lab activities that are relevant to each career that is being explored.
02.0	Demonstrate an understanding of the Diagnostic Services career pathway. The student will be able to:
02.01	Define and use proper terminology associated with the Diagnostic Services career pathway.
02.02	Explore a variety of careers in the Diagnostic Services career pathway. Suggested careers to focus on: Medical Laboratory Services; Radiology; Ophthalmology.
02.03	Identify common characteristics of the careers in the Diagnostic Services career pathway.
02.04	Identify skills required to successfully enter any career in the Diagnostic Services career pathway.
02.05	Perform lab activities related to careers being explored for example blood glucose testing, blood typing, and vision testing.
03.0	Demonstrate an understanding of the Health Informatics career pathway. The student will be able to:
03.01	Define and use proper terminology associated with the Health Informatics career pathway.

	03.02 Explore a variety of careers in the Health Informatics career pathway.
	03.03 Explore the careers available in the Health Informatics; Medical Coding/Biller; Medical Office Administration.
	03.04 Identify common characteristics of the careers in the Health Informatics career pathway.
	03.05 Identify skills required to successfully enter any career in the Health Informatics career pathway.
	03.06 Perform activities related to health informatics careers such as evaluating medical records or bills, office reception and support.
04.0	Demonstrate an understanding of the Support Services career pathway. The student will be able to:
	04.01 Define and use proper terminology associated with the Support Services career pathway.
	04.02 Explore a variety of careers in the Support Services career pathway. Suggested careers: dietary services; central supply; social services; environmental services.
	04.03 Identify common characteristics of the careers in the Support Services career pathway.
	04.04 Identify skills required to successfully enter any career in the Support Services career pathway.
	04.05 Perform lab skills related to covered careers such as diet plan design and housekeeping skills.
05.0	Demonstrate an understanding of the Biotechnology Research and Development career pathway. The student will be able to:
	05.01 Define and use proper terminology associated with the Biotechnology Research and Development career pathway.
	05.02 Explore a variety of careers in the Biotechnology Research and Development career pathway. Suggested careers: Biomedical Engineering and Biomedical Research.
	05.03 Identify skills required to successfully enter any career in the Biotechnology Research and Development career pathway.
	05.04 Perform lab skills related to covered career, for example: microbiology labs; investigating antisepsis procedures; DNA extraction lab.
	05.05 Explore the role of research in medical advancements and discoveries that promote wellness for example development of vaccines and discovery of the structure of DNA.
06.0	Apply leadership and communication skills. The student will be able to:
	06.01 Increase awareness of leadership opportunities through professional organizations such as Career Technical Student Organizations (CTSOs).
	06.02 Identify the characteristics of effective leadership.
	06.03 Demonstrate effective communication skills.
	06.04 Demonstrate an understanding of how information technology is used in health care.

Career and Education Planning [these must be met to satisfy the requirements of Section 1003.4156, Florida Statutes]	
Standards and Benchmarks	
07.0	Explain his or her career interests, skills and values. The student will be able to:
	07.01 Describe his or her career interests based on a career interest assessment, personal experience, career informational interviews, research and/or reflection.
	07.02 Describe what career-related skills are his or her current strengths or could become strengths in the future with practice and training based on a career skill assessment, personal experience and/or reflection.
	07.03 Describe what lifestyle and workplace values are most important to them to consider during career decision making, such as salary and benefits, work environment, the nature of the work and work/life balance.
	07.04 Describe what values that relate to positively impacting others and the world are most important to them to weigh during career decision making.
08.0	Describe occupations and industries in his or her region. The student will be able to:
	08.01 Define Career Clusters, industries and occupations.
	08.02 Define regional poverty, average and family-sustaining wage thresholds.
	08.03 Review local labor market data to identify the top five regional occupations as relates to each of the following: employment, growth and salary.
	08.04 List three occupations that align with his or her personal career interests, skills and values.
	08.05 List the regional salary, employment and growth of three occupations they are most interested in learning more about.
	08.06 Summarize occupational content learned through a career informational interview, career fair, job shadowing, service learning, guest speaker, project-based learning, work-based learning, worksite visit or other firsthand experience.
09.0	Describe a variety of postsecondary pathways. The student will be able to:
	09.01 Evaluate the pros and cons of pursuing education, employment, entrepreneurship or enlistment immediately following high school.
	09.02 Define postsecondary training provider options and their admissions requirements, including apprenticeships, technical colleges, state or community colleges, universities and industry-recognized certification providers.
	09.03 Define postsecondary credentialing and stacking options, including industry-recognized certifications, apprenticeship certificates of completion, career certificates, licenses and associate or baccalaureate degrees
	09.04 Explain training options aligned with his or her career assessment results and occupational exploration.
	09.05 Review postsecondary training data and list the total cost, average debt after graduation and median earnings and job placement rates of students who completed the student's preferred postsecondary training option.
	09.06 Summarize what they learned about his or her preferred postsecondary training provider through online research; virtual or in-person tours; a college fair; and/or interviewing a current student, alumni or staff member.
10.0	Create a personalized career and academic plan. The student will be able to:
	10.01 Prioritize an occupation for plan formation using one or more decision making techniques, such as a decision matrix, pros and cons analysis or other means

10.02 Explain the reasoning for choosing to pursue his or her preferred occupation
10.03 Identify which credentials, technical skills, and employability or entrepreneurship skills are relevant to his or her preferred career pathway.
10.04 Prioritize a recognized postsecondary credential (industry-recognized certifications, apprenticeship certificates of completion, career certificates, licenses and associate or baccalaureate degrees) aligned with his or her chosen occupation using a decision-making technique, such as a decision matrix and/or pros and cons analysis, etc.
10.05 Prioritize a postsecondary training provider aligned with his or her recognized postsecondary credential goal using a decision-making technique, such as a decision matrix and/or pros and cons analysis, etc.
10.06 Define means of paying for postsecondary training, including scholarships (must include State scholarships), grants, savings, work, work-study programs, private loans and Federal loans.
10.07 Describe ways of meeting the requirements of Florida's graduation pathways and obtaining accelerated credit, work-based learning experience, career and technical education credit and industry-recognized certifications in high school.
10.08 Develop a freshman year course schedule that meets high school graduation requirements and that provides academic and career preparation aligned with the student's career goals.
10.09 Identify extracurricular activities aligned with his or her occupational and postsecondary training goals.

Additional Information

Laboratory Activities

Laboratory activities are an integral part of this program. These activities include instruction in the use of safety procedures, tools, equipment, materials, and processes related to these occupations. Equipment and supplies should be provided to enhance hands-on experiences for students.

Florida Standards for English Language Development (ELD)

English language learners communicate for social and instructional purposes within the school setting. ELD.K12.ELL.SI.1

English Language Development (ELD) Standards Special Notes:
Teachers are required to provide listening, speaking, reading and writing instruction that allows English language learners (ELL) to communicate for social and instructional purposes within the school setting. For the given level of English language proficiency and with visual, graphic, or interactive support, students will interact with grade level words, expressions, sentences and discourse to process or produce language necessary for academic success. The ELD standard should specify a relevant content area concept or topic of study chosen by curriculum developers and teachers which maximizes an ELL's need for communication and social skills. For additional information on the development and implementation of the ELD standards, please contact the Bureau of Student Achievement through Language Acquisition at sala@fldoe.org.

Special Notes

The intended progression for the Health Science Middle School courses is Introduction to Health Science Career Pathways (8709350 & 8709360), Orientation to Health Science Professions (8400110) and Exploration of Health Science Professions (8400310 & 8400210). By offering the middle school courses in the intended progression, each course increases in complexity, rigor and skill level as appropriate.

Career Planning

Effective July 1, 2019, per Section 1003.4156, Florida Statutes (F.S.), for students to meet middle grades promotion requirements, a Career and Education Planning course must be completed in either sixth, seventh, or eighth grade. These courses should be taught integrating the eight career and education planning course standards.

Career and Technical Student Organization (CTSO)

CTSOs are co-curricular career and technical student organizations providing leadership training and reinforcing specific career and technical skills. Career and Technical Student Organizations provide activities for students as an integral part of the instruction offered. Other CTSOs not listed in this curriculum framework or recognized by the Florida Department of Education are permissible provided they support student mastery over the standards and benchmarks of this curriculum framework.

Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities as identified on the secondary student's Individual Educational Plan (IEP) or 504 plan or postsecondary student's accommodations' plan to meet individual needs and ensure equal access. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

In addition to accommodations, some secondary students with disabilities (students with an IEP served in Exceptional Student Education (ESE)) will need modifications to meet their needs. Modifications change the outcomes or what the student is expected to learn, e.g., modifying the curriculum of a secondary career and technical education course. Note: postsecondary curriculum and regulated secondary programs cannot be modified.

Florida Department of Education
Curriculum Framework

The standards and benchmarks for this program were updated for the 2026-27 academic year.

Program Title: **Biotechnology Laboratory Specialist**
Career Cluster: **Health Science**

College Credit Certificate	
CIP Number	0341010101
Program Type	College Credit Certificate (CCC)
Program Length	30 credit hours
CTSO	HOSA, SkillsUSA
SOC Codes (all applicable)	For program SOC codes, please see the Program and Course Tables section of the CTE Program Resources page linked below.
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml

Purpose

This certificate program is part of the Biotechnology Laboratory Technology AS degree program (1341010100).

A College Credit Certificate consists of a program of instruction of less than sixty (60) credits of college-level courses, which is part of an AS or AAS degree program and prepares students for entry into employment (Rule 6A-14.030, F.A.C.).

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Health Science career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of Health Science career cluster.

This program offers a sequence of Biotechnology, Chemistry, Statistics, and Health courses providing sound workforce content along with both academic preparation and industry-standard technical skills needed to advance education and careers in the biotechnology career cluster. This certificate provides for the development of technical ability, including competency-based applied learning to develop and enhance academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of the biotechnology career cluster.

The content includes but is not limited to broad biology and chemistry concepts, statistical analysis, documentation procedures, basic and advanced laboratory techniques and concepts, working in a regulated environment, and biohazard and safety procedures.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Program Structure

When developing the course sequence for the local implementation of this program, select courses that:

- Meet the skill development requirements of the standards and benchmarks of this program.
- Where reasonable and practicable, align with programs offered by your institution or other postsecondary institutions in Florida, including:
    - Related AS and AAS degrees.
    - Baccalaureate degrees within the same career pathway and/or Federal CIP code.

Visit FloridaShines' Discover Programs website to identify other institutions that offer similar programs to review their course sequencing. Where appropriate, course alignment between institutions offering related programs can facilitate interagency student articulation.

Visit FloridaShines' Common Prerequisites Manual to identify courses that are prerequisites for admission into an upper division program. When sub-baccalaureate courses are aligned to the course admissions requirements of baccalaureate programs with the same career pathway, students can enter upper division coursework seamlessly.

Florida's Career Readiness Skills for CTE Programs

Employability Skills	
01.0	Apply academic skills to workplace scenarios.
01.01	Use reading skills.
01.02	Use writing skills.
01.03	Use mathematical strategies and procedures.
01.04	Use scientific principles and procedures.
02.0	Design a solution to an industry problem.
02.01	Use critical thinking.
02.02	Use creativity.
02.03	Make sound decisions.
02.04	Solve problems.
02.05	Reason.
02.06	Plan and organize.
03.0	Manage resources within an industry project
03.01	Manage time.
03.02	Manage money or resources.
03.03	Manage materials.
03.04	Manage personnel.
04.0	Oversee the subcomponents, operations and output of a technical or organizational system.
04.01	Manage systems.
04.02	Monitor systems.
04.03	Improve systems.
05.0	Use information for decision making.
05.01	Locate information.
05.02	Organize information.
05.03	Use information.

	05.04 Analyze information.
	05.05 Communicate information.
06.0	Apply relevant technology to workplace scenarios to aid productivity.
	06.01 Use technology.
07.0	Interpret and express interpersonal communication.
	07.01 Communicate verbally.
	07.02 Listen actively.
	07.03 Comprehend written material.
	07.04 Convey information in writing.
	07.05 Communicate nonverbally.
	07.06 Interpret nonverbal communication.
08.0	Interact with others to accomplish workplace goals.
	08.01 Collaborate with others in a team.
	08.02 Respond to customer needs.
	08.03 Exercise leadership.
	08.04 Negotiate to resolve conflict.
	08.05 Respect others.
09.0	Manage personal behavior to maximize productivity and professional growth.
	09.01 Demonstrate responsibility and self-discipline.
	09.02 Adapt and show flexibility.
	09.03 Work independently.
	09.04 Demonstrate a willingness to learn.
	09.05 Demonstrate integrity.
	09.06 Demonstrate professionalism.
	09.07 Take initiative.
	09.08 Display positive attitude.
	09.09 Take responsibility for professional growth.

Job Attainment	
10.0	Find, assess and apply to job opportunities.
10.01	Identify online job posts relevant to his or her career aspirations.
10.02	Compare and contrast the job posts' required qualifications, job duties, compensation, benefits and employers.
10.03	Define what information, documentation and writing prompts are required for the positions.
11.0	Communicate personal competence, character and fit for a job opportunity.
11.01	Develop a resume.
11.02	Write a cover letter.
11.03	Curate a professional portfolio that includes work products.
11.04	Prepare for and experience a mock job interview.
12.0	Cultivate and leverage relationships to professionally advance.
12.01	Request a signed reference letter, letter of recommendation and/or an online skill/professionalism endorsement.
12.02	Develop a plan to cultivate a professional digital footprint.
12.03	Develop a networking plan for a specific industry of interest.

Standards

After successfully completing this program, the student will be able to perform the following:

01.0 Apply communication skills.
02.0 Follow laboratory safety requirements.
03.0 Apply basic laboratory skills.
04.0 Follow regulatory compliance.
05.0 Demonstrate appropriate decision-making and problem-solving techniques.
06.0 Apply advanced laboratory skills.
07.0 Implement quality assurance/control measurements.
08.0 Recognize facility and equipment maintenance.

Florida Department of Education
Student Performance Standards

Program Title: **Biotechnology Laboratory Specialist**
CIP Number: **0341010101**
Program Length: **30 credit hours**

This certificate program is part of the Biotechnology Laboratory Technology AS degree program (1341010100). At the completion of this program, the student will be able to:	
01.0	Apply communication skills. The student will be able to:
01.01	Prepare professional oral and written presentations.
01.02	Comprehend and use correct scientific, technical, and medical vocabulary.
01.03	Follow experimental protocols, laboratory protocols, and scientific literature.
01.04	Identify experimental controls.
01.05	Follow laboratory protocols, standard operating procedures (SOPs), and scientific techniques.
01.06	Maintain accurate laboratory records in notebooks, batch records, or other approved media.
01.07	Explore computerized databases, such as the National Center for Biotechnology Information (NCBI), and identify resources necessary for biotechnology.
01.08	Recognize differences between peer-reviewed scientific references and non-scientific sources.
01.09	Recognize the scientific process, including formulating a hypothesis.
01.10	Illustrate an ethical application of artificial intelligence tools.
02.0	Follow laboratory safety requirements. The student will be able to:
02.01	Locate first aid supplies, eye wash station, emergency shower, co-worker contact, medical information, emergency and chemical protection, and evacuation plan.
02.02	Follow correct safety procedures, guidelines, and chemical hygiene plans.
02.03	Follow the required environmental health, safety, and laboratory training.
02.04	Handle, store, and dispose of hazardous materials per appropriate MSDS, other safety guidelines, Worker Protection Standards (WPS), and/or appropriate regulatory guidelines (i.e., state, federal, local, accreditation, etc.).
02.05	Follow standard precautions for biological pathogens using proper handling and disposal methods and follow guidelines of contamination control.

	02.06 Identify procedures for declaring a laboratory emergency and the appropriate institutional response procedures.
03.0	Apply basic laboratory skills. The student will be able to:
	03.01 Obtain and read protocols, follow test procedures, use standard operating procedures (SOPs), and follow equipment manuals.
	03.02 Prioritize and perform multiple tasks in a timely manner, based upon priorities communicated by supervisor.
	03.03 Clean, organize, and sterilize materials and laboratory instruments when required.
	03.04 Organize supply inventory, date and label reagents, and store promptly upon arrival.
	03.05 Demonstrate knowledge of aseptic techniques and practice procedures such as hand-washing and specimen isolation.
	03.06 Master titration/pipetting techniques and measurement of volume/weights.
	03.07 Perform basic calculations, unit conversions, graphing of data, and statistical analysis.
	03.08 Calculate and prepare a dilutions series.
	03.09 Prepare solutions and reagents for laboratory use.
	03.10 Monitor physical properties of reagents, buffers, media, and solutions, and determine optimum conditions for use.
	03.11 Obtain and review appropriate procedures and test forms, prepare for laboratory inspections, and respond to the reports.
	03.12 Collect and set up samples for analysis.
	03.13 Perform general laboratory tests, including setup equipment, and perform/document tests and results.
	03.14 Demonstrate knowledge of chemical cross-contamination control between reagents from weighing implements, storage containers, and media.
	03.15 Make estimations and approximations and judge the reasonableness of the result.
04.0	Follow regulatory compliance. The student will be able to:
	04.01 Follow guidelines from the appropriate regulatory, accreditation, and/or certification agencies, such as FDA, OSHA, USDA, NIH, NR, DOT, EPA, CDC, ISO/IEC, and NRC.
	04.02 Comply with principles using current Good Experimental Practices and quality improvement systems (e.g., GXP; GLP, GMP, GCP)
05.0	Demonstrate appropriate decision-making and problem-solving techniques. The student will be able to:
	05.01 Identify decisions and compare alternatives.

	05.02 Make decisions based on facts, data, and analyses.
	05.03 Evaluate the experimental outcomes and draw conclusions.
	05.04 Diagnose problems, their urgency and causes, and maintain documentation as appropriate.
	05.05 Determine potential alternative hypotheses and further action(s).
06.0	Apply advanced laboratory skills. The student will be able to:
	06.01 Apply microbiology skills, such as plating and aseptic techniques, growth on differential and selective media, and staining procedures.
	06.02 Utilize molecular biology techniques such as cloning and transformation.
	06.03 Perform immunological techniques, such as enzyme-linked immunosorbent assays (ELISA), use of monoclonal and polyclonal antibodies, Western blot techniques, and conduct enzyme activity assays.
	06.04 Apply various molecular biology techniques, such as DNA, RNA, protein, isolation, quantitation, amplification, characterization, molecular stability, electrophoresis, hybridization techniques, and construction of recombinant vectors.
	06.05 Perform translation assays, construction of DNA libraries, and labeling techniques.
	06.06 Compare chemical assays, such as measuring turbidity, viscosity, density, quantitative analysis, distillation techniques, titration techniques, employing dyes and indicators, and lyophilization.
	06.07 Demonstrate knowledge of instrument-based separation, such as various chromatography techniques and other separation methodologies (e.g., FACS).
	06.08 Demonstrate knowledge of various techniques associated with animal, plant, and/or microbial cell culture, including isolation, maintenance, characterization, and storage of pure cultures.
	06.09 Summarize the principles underlying spectroscopic analysis.
07.0	Implement quality assurance/control measurements. The student will be able to:
	07.01 Perform quality tests, follow SOPs, and complete batch records.
	07.02 Verify test standards and maintain Quality Assurance records.
	07.03 Archive samples and documents.
	07.04 Inspect and verify the integrity of product, procedure, and specimen.
	07.05 Explain the role of statistical trend analysis for the release of the final product.
	07.06 Investigate complaints and take corrective action.
08.0	Recognize facility and equipment maintenance. The student will be able to:

08.01	Describe the essential conditions for the facility and equipment for laboratory maintenance (e.g., growth chamber, laboratory, greenhouse, storage room, animal room, freezers, or manufacturing site).
08.02	Notify appropriate personnel when required conditions in the facility are not met.
08.03	Clean work area according to SOPs and/or facility requirements.
08.04	Label equipment following facility requirements.
08.05	Check for equipment calibration and equipment logs.
08.06	Operate laboratory equipment and instrumentation after familiarization with manuals and/or training.

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as, experimental, quality, and safety procedures are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate and troubleshoot equipment/tools used to make observations. Students understand measurement error and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

Special Notes

This program is designed to prepare students for employment as Biotechnology Research Technicians, Biological Technicians, cell culture technicians, or biotechnology manufacturing technicians, and/or to supply supplemental training for persons previously or currently employed in these occupations.

Career and Technical Student Organization (CTSO)

CTSOs are co-curricular career and technical student organizations providing leadership training and reinforcing specific career and technical skills. Career and Technical Student Organizations provide activities for students as an integral part of the instruction offered. Other CTSOs not listed in this curriculum framework or recognized by the Florida Department of Education are permissible provided they support student mastery over the standards and benchmarks of this curriculum framework.

Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

Florida Department of Education
Curriculum Framework

The standards and benchmarks for this program were updated for the 2026-27 academic year.

Program Title: **Dental Assisting Technology and Management**
Program Type: **ATD (Applied Technology Diploma)**
Career Cluster: **Health Science**

	College Credit	Clock Hour
Program Number	N/A	H170113
CIP Number	0351060108	0351060113
Grade Level	Applied Technology Diploma (ATD)	30, 31
Program Length	50 credit hours	1230 clock hours
CTSO	HOSA	HOSA
SOC Codes (all applicable)	For program SOC codes, please see the Program and Course Tables section of the CTE Program Resources page linked below.	
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml	
Basic Skills Level:	N/A	Computation (Mathematics): 10 Communications (Reading and Language Arts): 10

Purpose

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Health Science career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of Health Science career cluster.

The program is designed to prepare students for employment as dental assistants 66002, educational managers for dental companies, and dental assisting educators. The program will prepare students for the Dental Assisting National Board Examination as well as state requirements. The program should meet the requirements of the Commission on Dental Accreditation of the American Dental Association and standards recommended by the Florida Board of Dentistry.

The content includes but is not limited to, dental office and patient management, basic dental laboratory procedures, dental and general anatomy, dental terminology, nutrition, dental instrument and equipment utilization, microbiology, dental pharmacology and anesthesia, chairside assisting

and expanded functions, dental office emergencies/CPR, dental radiography, maintenance and asepsis of dental operatory and instrumentation, dental specialty procedures, employability skills, leadership and human relations skills, ethics and jurisprudence, dental materials and preventive dentistry.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Program Structure

This program is an Applied Technology Diploma (ATD) program that is part of a technical degree program, is less than 60 credit hours, and leads to employment in a specific occupation. An ATD program may consist of either technical credit or college credit. A public school district may offer an ATD program only as clock hour credit, with college credit awarded to a student upon articulation to a state college.

When developing the course sequence for the local implementation of this program, select courses that:

- Meet the skill development requirements of the standards and benchmarks of this program.
- Where reasonable and practicable, align with programs offered by your institution or other postsecondary institutions in Florida, including:
  - Related AS and AAS degrees.
  - Baccalaureate degrees within the same career pathway and/or Federal CIP code.

Visit FloridaShines' Discover Programs website to identify other institutions that offer similar programs to review their course sequencing. Where appropriate, course alignment between institutions offering related programs can facilitate interagency student articulation.

Visit FloridaShines' Common Prerequisites Manual to identify courses that are prerequisites for admission into an upper division program. When sub-baccalaureate courses are aligned to the course admissions requirements of baccalaureate programs with the same career pathway, students can enter upper division coursework seamlessly.

Clock Hour Program

When offered at the district level, this program is a planned sequence of instruction consisting of 3 occupational completion points and the courses as shown below.

OCP	Course Number	Course Title	Length
A	DEA0725	Introduction to Dental Assisting	90 hours
B	DEA0726	Dental Infection Control Assistant	210 hours
C	DEA0727	Dental Assisting 1	465 hours
	DEA0728	Dental Assisting 2	465 hours

College Credit Program

When offered at the college credit level, this ATD program is part of the Dental Assisting Technology and Management AS (1351060104) and has a program length of 50 credits.

Florida's Career Readiness Skills for CTE Programs

Employability Skills	
01.0	Apply academic skills to workplace scenarios.
01.01	Use reading skills.
01.02	Use writing skills.
01.03	Use mathematical strategies and procedures.
01.04	Use scientific principles and procedures.
02.0	Design a solution to an industry problem.
02.01	Use critical thinking.
02.02	Use creativity.
02.03	Make sound decisions.
02.04	Solve problems.
02.05	Reason.
02.06	Plan and organize.
03.0	Manage resources within an industry project
03.01	Manage time.
03.02	Manage money or resources.
03.03	Manage materials.
03.04	Manage personnel.
04.0	Oversee the subcomponents, operations and output of a technical or organizational system.
04.01	Manage systems.
04.02	Monitor systems.
04.03	Improve systems.
05.0	Use information for decision making.
05.01	Locate information.
05.02	Organize information.
05.03	Use information.

	05.04 Analyze information.
	05.05 Communicate information.
06.0	Apply relevant technology to workplace scenarios to aid productivity.
	06.01 Use technology.
07.0	Interpret and express interpersonal communication.
	07.01 Communicate verbally.
	07.02 Listen actively.
	07.03 Comprehend written material.
	07.04 Convey information in writing.
	07.05 Communicate nonverbally.
	07.06 Interpret nonverbal communication.
08.0	Interact with others to accomplish workplace goals.
	08.01 Collaborate with others in a team.
	08.02 Respond to customer needs.
	08.03 Exercise leadership.
	08.04 Negotiate to resolve conflict.
	08.05 Respect others.
09.0	Manage personal behavior to maximize productivity and professional growth.
	09.01 Demonstrate responsibility and self-discipline.
	09.02 Adapt and show flexibility.
	09.03 Work independently.
	09.04 Demonstrate a willingness to learn.
	09.05 Demonstrate integrity.
	09.06 Demonstrate professionalism.
	09.07 Take initiative.
	09.08 Display positive attitude.
	09.09 Take responsibility for professional growth.

Job Attainment	
10.0	Find, assess and apply to job opportunities.
10.01	Identify online job posts relevant to his or her career aspirations.
10.02	Compare and contrast the job posts' required qualifications, job duties, compensation, benefits and employers.
10.03	Define what information, documentation and writing prompts are required for the positions.
11.0	Communicate personal competence, character and fit for a job opportunity.
11.01	Develop a resume.
11.02	Write a cover letter.
11.03	Curate a professional portfolio that includes work products.
11.04	Prepare for and experience a mock job interview.
12.0	Cultivate and leverage relationships to professionally advance.
12.01	Request a signed reference letter, letter of recommendation and/or an online skill/professionalism endorsement.
12.02	Develop a plan to cultivate a professional digital footprint.
12.03	Develop a networking plan for a specific industry of interest.

Standards

After successfully completing this program, the student will be able to perform the following:

01.0 Demonstrate knowledge of the dental health care delivery system and dental health occupations.
02.0 Use oral, written, and electronic communication skills with professional etiquette in creating, expressing, and interpreting information and ideas.
03.0 Describe the legal and ethical responsibilities of the dental health care worker.
04.0 Demonstrate an understanding of general anatomy and physiology and apply wellness and disease concepts.
05.0 Demonstrate the importance of health, safety, and environmental management systems in dental organizations and their importance to organizational performance and regulatory compliance.
06.0 Recognize and respond to emergency situations.
07.0 Use information technology tools.
08.0 Explain the importance of employability skills.
09.0 Demonstrate knowledge of airborne and blood-borne diseases.
10.0 Demonstrate leadership and teamwork skills needed to accomplish team goals and objectives.
11.0 Use dental terminology.
12.0 Identify structures and explain functions and pathologies of dental and general head and neck anatomy.
13.0 Identify principles of microbiology, disease transmission, and disease prevention, and perform infection control procedures.
14.0 Identify, describe, maintain, and utilize dental instruments and equipment.
15.0 Record patient assessment and treatment data.
16.0 Identify the functions of pharmacology and anesthesia as they relate to dentistry.
17.0 Identify and perform dental radiographic procedures using current technology.
18.0 Identify properties and uses and manipulate dental materials.
19.0 Perform chairside assisting for general dentistry and specialty procedures.
20.0 Describe principles and perform techniques of preventive dentistry.
21.0 Perform general dental business office procedures.
22.0 Demonstrate professionalism as a dental team member in the clinical setting.

Florida Department of Education
Student Performance Standards

Program Title: Dental Assisting Technology and Management – ATD
Clock Hour Program Number: H170113

When this program is offered at the district level, the following organization of courses, standards, and benchmarks apply.

Course Number: DEA0725 **Occupational Completion Point: A** **Introduction to Dental Assisting – 90 Hours**	
01.0	Demonstrate knowledge of the dental health care delivery system and dental health occupations. The student will be able to:
01.01	Identify the basic components of the dental health care delivery system, including public, private, government, and non-profit.
01.02	Describe the various types of dental health care providers and the range of services available.
01.03	Describe the composition and functions of a dental health care team.
01.04	Identify the general roles and responsibilities of the individual members of the dental health care team.
01.05	Identify the roles and responsibilities of the consumer within the dental healthcare system.
01.06	Explain the causes and effects of factors that influence the current delivery system of dental healthcare.
01.07	Discuss the impact of emerging issues, including technology, epidemiology, bioethics, and socioeconomics, on the dental healthcare delivery system.
01.08	Discuss the history of dentistry and the dental health care team.
01.09	Demonstrate knowledge in communicating and collaborating with other members of the health care team to support comprehensive patient care.
02.0	Use oral, written, and electronic communication skills with professional etiquette in creating, expressing, and interpreting information and ideas. The student will be able to:
02.01	Apply basic speaking and active listening skills, including reflection, restatement, and clarification techniques.
02.02	Develop basic observational skills and related documentation strategies in written and oral form.
02.03	Identify characteristics of communication, including communication styles and barriers.
02.04	Compose written communication using correct spelling, grammar, etiquette, formatting, confidentiality, and specific formats of letter writing.
02.05	Recognize components of medical and dental terminology, abbreviations, and their uses.

	02.06	Recognize the importance of courtesy and respect for patients and other health care workers and maintain good interpersonal relationships.
	02.07	Recognize the importance of patient education regarding dental and health care.
	02.08	Adapt communication skills to varied levels of understanding and orientation of diversity, but not limited to sexual orientation, gender orientation, disability, age, culture, economics, or ethnicity.
	02.09	Identify psychological considerations influencing communication and behaviors.
03.0	Describe the legal and ethical responsibilities of the dental health care worker. The student will be able to:	
	03.01	Identify areas of 466, F.S. and Rule 64B5-16, F.A.C. and Rule 64B5-25, F.A.C. applicable to practice by the dental health workers and providers.
	03.02	Explain practices that could result in malpractice, liability, negligence, abandonment, false imprisonment, and fraud.
	03.03	Demonstrate procedures for accurate documentation and record keeping.
	03.04	Interpret healthcare facility policy and procedures.
	03.05	Explain the patients' "Bill of Rights”.
	03.06	Identify and implement standards of the Health Insurance Portability and Accountability Act (HIPAA) and apply these standards to social media and the use of personal electronic devices in the workplace.
	03.07	Distinguish between expressed, implied, and informed consent.
	03.08	Explain the laws governing harassment, labor, and employment.
	03.09	Differentiate between legal and ethical issues in dentistry.
	03.10	Describe the dental profession’s Code of Ethics with emphasis on the dental assisting profession.
	03.11	Identify and compare personal, professional, and organizational ethics.
	03.12	Recognize the limits of authority and responsibility of dental health care workers, including legislated scope of practice.
	03.13	Recognize and report illegal and/or unethical practices of dental health care workers.
	03.14	Recognize various forms of abuse (i.e., trafficking, domestic violence, and neglect).
	03.15	Demonstrate an understanding of reporting requirements for all types of abuse.
	03.16	Identify resources for victims of abuse.
	03.17	Explain risk management and root cause analysis.

	03.18 Define commonly used legal vocabulary relating to dentistry.
	03.19 Describe ethical considerations/obligations in the dental team-patient relationship.
	03.20 Apply self-assessment skills to prepare for lifelong learning.
	03.21 Apply ethical principles, legal, and regulatory concepts to resolve ethical dilemmas.
04.0	Demonstrate an understanding of general anatomy and physiology and apply wellness and disease concepts. The student will be able to:
	04.01 Develop a basic understanding of the structure and function of the body systems.
	04.02 Identify common disorders related to each of the body systems.
	04.03 Identify and develop a control plan to address the issues of positive self-image, wellness, and stress.
05.0	Demonstrate the importance of health, safety, and environmental management systems in dental organizations and their importance to organizational performance and regulatory compliance. The student will be able to:
	05.01 Describe personal and jobsite safety rules and regulations that maintain safe and healthy work environments.
	05.02 Identify and describe methods in medical error reduction and prevention in the dental healthcare setting.
	05.03 Demonstrate an understanding of personal safety procedures based on the Occupational Safety and Health Administration (OSHA) and Centers for Disease Control (CDC) regulations (including standard precautions).
	05.04 Recognize Safety Data Sheets (SDS) and Globally Harmonized System (GHS) labels and comply with safety signs, symbols, and labels.
	05.05 Demonstrate procedures for the safe transport and transfer of patients.
	05.06 Describe workplace preparedness and procedures for fire safety, disaster, and evacuation.
	05.07 Explain emergency procedures to follow for responding to, reporting, and recording workplace accidents and acts of violence.
	05.08 Demonstrate handwashing and the use of personal protective equipment used in dentistry.
06.0	Recognize and respond to emergency situations. The student will be able to:
	06.01 Take and record vital signs.
	06.02 Describe legal parameters relating to the administration of emergency care.
	06.03 Obtain and maintain certification in basic life support (BLS), cardiopulmonary resuscitation (CPR), automated external defibrillator (AED), foreign body airway obstruction (FBAO), and first aid.
07.0	Use information technology tools. The student will be able to:

	07.01 Define terms and demonstrate basic computer skills.
	07.02 Interpret information from electronic medical documents.
08.0	Explain the importance of employability skills. The student will be able to:
	08.01 Identify personal traits or attitudes desirable in a member of the healthcare team.
	08.02 Exemplify basic professional standards of dental healthcare workers/providers as they apply to hygiene, dress, language, confidentiality, and behavior (i.e., telephone etiquette, courtesy, and self-introductions).
	08.03 Examine levels of education and industry credentialing requirements, including licensure and certification, employment opportunities, workplace environments, and career growth potential.
09.0	Demonstrate knowledge of airborne and blood-borne diseases. The student will be able to:
	09.01 Recognize emerging diseases and disorders.
	09.02 Demonstrate knowledge of the transmission and treatment of diseases caused by airborne and blood-borne pathogens, infectious agents, and organisms.
	09.03 Identify "at risk" behaviors that promote the spread of infectious diseases caused by airborne and blood-borne pathogens and the public education necessary to combat the spread of these diseases.
	09.04 Identify community resources and services available to individuals with diseases caused by airborne and blood borne pathogens.
	09.05 Apply infection control techniques designed to prevent the spread of diseases caused by airborne and blood-borne pathogens to the care of all patients following the Centers for Disease Control and Prevention (CDC) guidelines.
	09.06 Demonstrate knowledge of the legal aspects of patient privacy, standard precautions, and incident reporting protocols.
	09.07 Demonstrate knowledge of the legal aspects of treating patients with infectious diseases, including testing and proper documentation.
10.0	Demonstrate leadership and teamwork skills needed to accomplish team goals and objectives. The students will be able to:
	10.01 Analyze attributes and attitudes of an effective leader to include emotional intelligence.
	10.02 Recognize factors and situations that may lead to conflict.
	10.03 Demonstrate effective problem-solving techniques for managing team conflict.

Course Number: DEA0726
Occupational Completion Point: B
Dental Infection Control Assistant – 210 Hours

11.0	Use dental terminology. The student will be able to:

	11.01 Identify and define common dental terms.
	11.02 Demonstrate the use of proper dental terminology in the dental environment.
12.0	Identify structures and explain functions and pathologies of dental and general head and neck anatomy. The student will be able to:
	12.01 Identify structures and functions of the head and neck anatomy, including bones, muscles, sinuses, salivary glands, lymph nodes, nerves, and blood vessels.
	12.02 Identify embryonic development of the head, oral cavity, and teeth.
	12.03 Identify teeth and their landmarks, and the morphological characteristics of each individual tooth.
	12.04 Describe the histological components of the head, oral cavity, and elements of the teeth and supporting structures.
	12.05 Recognize and describe oral pathological conditions related to the teeth and their supporting structures.
	12.06 Recognize and describe developmental anomalies related to the teeth, face, and oral structures.
	12.07 Describe and differentiate between occlusion and malocclusion.
	12.08 Discuss the adverse effects of the use of alcohol, tobacco, and both legal and illegal drugs on the oral cavity.
13.0	Identify principles of microbiology, disease transmission, and disease prevention, and perform infection control procedures. The student will be able to:
	13.01 Differentiate between pathogenic and non-pathogenic microorganisms.
	13.02 Describe pathogens and modes of disease transmission.
	13.03 Differentiate between aseptic and non-aseptic environments.
	13.04 Perform aseptic handwashing technique.
	13.05 Describe, apply, and differentiate between methods of pre-cleaning, disinfection, and sterilization of the dental environment.
	13.06 Identify chemicals and their uses for controlling the spread of disease in the dental environment.
	13.07 Identify and practice the current CDC guidelines for infection control in dental healthcare settings.
	13.08 Describe the duties of the dental office safety coordinator.
	13.09 Demonstrate compliance with the OSHA Blood Borne Pathogens Standard (29CFR-1910.1030) applicable to the dental office environment.
	13.10 Identify and manage hazardous chemicals and biomedical wastes in accordance with the OSHA Hazard Communications Standard (29CFR-1910.1200), 64E-16 F.A.C., and Environmental Protection Agency regulations.

	13.11 Define principles of infection control, including standard and transmission-based precautions.
	13.12 Demonstrate knowledge of dental asepsis within the dental environment.
	13.13 Implement appropriate hand hygiene procedures and use of personal protective equipment.
	13.14 Demonstrate knowledge of surgical asepsis and isolation.
14.0	Identify, describe, maintain, and utilize dental instruments and equipment. The student will be able to:
	14.01 Identify various types, functions, and operations of dental operatory and laboratory equipment.
	14.02 Identify types and functions of operative, restorative, surgical, prosthodontic, periodontic, orthodontic, and endodontic dental instruments.
	14.03 Maintain dental operatory equipment and instruments.
	14.04 Identify types and functions of specific dental hygiene instruments with emphasis on category rather than individual instruments.
	14.05 Seat and dismiss patients.
	14.06 Operate oral evacuation devices and air/water syringe.
	14.07 Maintain a clear field of vision, including isolation techniques.
	14.08 Perform a variety of instrument transfers to include four-handed dentistry.
	14.09 Utilize appropriate chairside assistant ergonomics.
	14.10 Assist with and place dental dams as permitted by Florida Statute and Florida Board of Dentistry Rule.

Course Number: DEA0727 Occupational Completion Point: C Dental Assisting 1 – 465 Hours	
15.0	Record patient assessment and treatment data. The student will be able to:
	15.01 Take and record medical, health, and dental histories.
	15.02 Record assessment of existing oral conditions.
	15.03 Perform intraoral and extraoral photography.
	15.04 Record conditions diagnosed by the dentist.

15.05	Record treatment-related data on the patient's clinical record.
15.06	Record treatment plan and treatment in the patient's chart.
15.07	Perform a visual assessment of existing oral conditions.
15.08	Distinguish between and report subjective, objective, indications, and contraindication information.
15.09	Report relevant information in order of occurrence.
16.0	Identify the functions of pharmacology and anesthesia as they relate to dentistry. The student will be able to:
16.01	Identify drug requirements, agencies, and regulations, including prescribing regulations related to medications subject to addiction.
16.02	Distinguish among the five schedules of controlled substances.
16.03	Record a drug/medication prescription in a patient's chart.
16.04	Understand ratios and proportional problems to calculate prescribed drug dosages as instructed by the dentist.
16.05	Identify drug/medicaments actions, metabolism, side effects, indications, and contraindications; verify with Physician's Desk Reference (PDR) or its equivalent.
16.06	Identify pharmaceuticals and medicaments used in dentistry.
16.07	Identify the tissues innervated by each of the nerves associated with dental local and topical anesthetics to prepare and apply a topical anesthetic agent.
16.08	Identify properties of anesthetics.
16.09	Prepare syringes for the administration of local anesthetics.
16.10	Monitor and identify precautions in the use of nitrous oxide-oxygen conscious sedation.
16.11	Understand the calculations of nitrous oxide-oxygen delivered by the dentist during a conscious sedation procedure.
16.12	Identify drugs and agents used for treating dental-related infection.
16.13	Identify and respond to dental office emergencies.
16.14	Describe the signs and symptoms of drug addiction.
16.15	Recognize specific conditions in the oral cavity that may be caused by pharmaceutical agents.
16.16	Discuss the dental team's responsibility to recognize patients with drug addictions.

17.0	Identify and perform dental radiographic procedures using current technology. The student will be able to:
17.01	Describe the history, physics, and biological effects of ionizing radiation.
17.02	Identify parts of the radiography machine, including accessories.
17.03	Demonstrate radiologic health protection techniques.
17.04	Place and expose dental radiographic images on digital image receptors.
17.05	Perform extraoral radiography as required for dental diagnostic procedures.
17.06	Describe and identify radiographic anatomical landmarks and pathologies.
17.07	Mount radiographic images.
17.08	Describe how to maintain digital image receptors and/or image devices.
17.09	Maintain digitally acquired radiographic images.
17.10	Practice infection control procedures for all radiographic procedures.
18.0	Identify properties and uses and manipulate dental materials. The student will be able to:
18.01	Identify properties and uses and manipulate gypsum.
18.02	Identify properties and uses and manipulate restorative materials.
18.03	Identify properties and uses and manipulate dental cements.
18.04	Place and remove matrices as permitted by Florida Statute and Florida Board of Dentistry Rule.
18.05	Place and remove temporary restorations as permitted by Florida Statute and Florida Board of Dentistry Rule.
18.06	Identify properties and uses and manipulate impression materials.
18.07	Make intraoral impressions as permitted by Florida Statute and Florida Board of Dentistry Rule.
18.08	Identify properties and uses and manipulate acrylics and thermoplastic materials.
18.09	Identify properties and uses and manipulate waxes.
18.10	Perform dental laboratory procedures to include the fabrication of casts, custom trays, whitening trays, temporary crowns, and bridges.
18.11	Identify and manage hazardous dental materials and wastes in accordance with the OSHA Hazard Communications Standard

	(29CFR-1910.1200) and Environmental Protection Agency regulations.
18.12	Employ measurements of time, temperature, distance, capacity, and mass/weight during the manipulation of dental materials.
19.0	Perform chairside assisting for general dentistry and specialty procedures. The student will be able to:
19.01	Describe procedures, equipment, materials, and instrumentation used in the dental specialties to include but not limited to periodontics, endodontics, pedodontics, oral and maxillofacial specialties, orthodontics, prosthodontics, dental radiology, pathology, oral implantology, dental anesthesia, dentofacial orthopedics, and oral medicine.
19.02	Assemble tray set-ups for general and specialty dental procedures.
19.03	Assist in general and specialty dental procedures.
19.04	Describe the special needs of patients during dental procedures.
19.05	Perform patient education to include pre- and post-operative instructions as prescribed by a dentist.
19.06	Describe procedures, equipment, and materials utilized in digital dentistry to include CAD/CAM and intraoral scanning technology.
19.07	Identify, describe, and demonstrate the uses and principles of phlebotomy as they pertain to dentistry.
19.08	Identify, describe, and demonstrate the properties, uses, and principles of autologous blood concentrates as they pertain to dentistry.

Course Number: DEA0728 **Occupational Completion Point: C** **Dental Assisting 2 – 465 Hours**	
20.0	Describe principles and perform techniques of preventive dentistry. The student will be able to:
20.01	Describe the process of oral biofilm formation and its management through preventative dentistry.
20.02	Provide patient preventive education and oral hygiene instruction.
20.03	Identify, communicate, and instruct patients on applicable methods of preventative dentistry that utilize: • Risk assessment • Evidence-based learning • Individualized preventive care plans • Motivational interviewing/counseling
20.04	Training regarding health status and rationale for a preventive care plan.
20.05	Prepare and set up for various preventative procedures.
20.06	Identify properties and uses of abrasive agents used to polish coronal surfaces and appliances.

20.07	Perform coronal polish and apply anticariogenic and desensitizing treatments as permitted by Florida Statute and Florida Board of Dentistry Rule.
20.08	Clean and polish removable dental appliances.
20.09	Apply dental sealants as permitted by Florida Statute and Florida Board of Dentistry Rule.
20.10	Identify the elements of nutrition, basic food groups, and acceptable diets as recommended by the U.S. Department of Agriculture.
20.11	Identify dietary deficiencies and dietary practices that contribute to the manifestation of symptoms in the oral cavity.
20.12	Describe the metabolism of nutrient foods, vitamins, and minerals by the human body and pathological conditions related to nutrient deficiencies.
20.13	Identify community dental resources and services available.
20.14	Understand the dynamics of preventive dentistry in the dental public health setting.
21.0	Perform general dental business office procedures. The student will be able to:
21.01	Maintain appointment control.
21.02	Assess, create, modify, and maintain an active re-care system.
21.03	Prepare and maintain accurate patient records.
21.04	Prepare and maintain patient financial records and collect fees.
21.05	Demonstrate the use of dental procedure codes and current terminology when preparing and managing insurance claims.
21.06	Differentiate the different categories of dental procedure codes.
21.07	Prepare and maintain dental office inventory control and purchasing.
21.08	Demonstrate public relations responsibilities of the secretary/receptionist.
21.09	Demonstrate skills on office equipment to include computers and dental office management practice software.
21.10	Maintain the dental business office environment.
21.11	Receive and dismiss patients and visitors.
21.12	Demonstrate appropriate patient management/customer service skills.
21.13	Demonstrate and maintain office financial records and budgets.

21.14	Describe the effect of money management on practice goals.
22.0	Demonstrate professionalism as a dental team member in the clinical setting. The student will be able to:
22.01	Perform dental assisting duties, dental assisting expanded functions, and dental radiographic procedures in a clinical setting under the direct supervision of a licensed dentist.
22.02	Interact with a professional dental team in the delivery of patient services.
22.03	Utilize employability skills.
22.04	Develop and maintain a professional portfolio to document knowledge, continued education, skills, and experience.
22.05	Write an appropriate resume.
22.06	Conduct a job search and complete a job application correctly.
22.07	Demonstrate effective job interview techniques.
22.08	Examine levels of education and credentialing requirements, including licensure and certification, employment opportunities, workplace environments, and career growth potential.

Florida Department of Education
Student Performance Standards

Program Title: Dental Assisting Technology and Management – ATD
ATD CIP Number: 0351060108

When this program is offered at the college level, the following standards and benchmarks apply:

01.0	Demonstrate knowledge of the dental health care delivery system and dental health occupations. The student will be able to:
01.01	Identify the basic components of the dental health care delivery system, including public, private, government, and non-profit.
01.02	Describe the various types of dental health care providers and the range of services available.
01.03	Describe the composition and functions of a dental health care team.
01.04	Identify the general roles and responsibilities of the individual members of the dental health care team.
01.05	Identify the roles and responsibilities of the consumer within the dental healthcare system.
01.06	Explain the causes and effects of factors that influence the current delivery system of dental healthcare.
01.07	Discuss the impact of emerging issues, including technology, epidemiology, bioethics, and socioeconomics on the dental healthcare delivery system.
01.08	Discuss the history of dentistry and the dental health care team.
01.09	Demonstrate knowledge in communicating and collaborating with other members of the health care team to support comprehensive patient care.
02.0	Use oral, written, and electronic communication skills with professional etiquette in creating, expressing, and interpreting information and ideas. The student will be able to:
02.01	Apply basic speaking and active listening skills, including reflection, restatement, and clarification techniques.
02.02	Develop basic observational skills and related documentation strategies in written and oral form.
02.03	Identify characteristics of communication, including communication styles and barriers.
02.04	Compose written communication using correct spelling, grammar, etiquette, formatting, confidentiality, and specific formats of letter writing.
02.05	Recognize components of medical and dental terminology and abbreviations and their uses.
02.06	Recognize the importance of courtesy and respect for patients and other health care workers and maintain good interpersonal relationships.

02.07	Recognize the importance of patient education regarding dental and health care.
02.08	Adapt communication skills to varied levels of understanding and orientation of diversity, but not limited to sexual orientation, gender orientation, disability, age, culture, economics, ethnicity.
02.09	Identify psychological considerations influencing communication and behaviors.
03.0	Describe the legal and ethical responsibilities of the dental health care worker. The student will be able to:
03.01	Identify areas of 466, F.S. and Rule 64B5-16, F.A.C and Rule 64B5-25, F.A.C. applicable to practice by the dental health workers and providers.
03.02	Explain practices that could result in malpractice, liability, negligence, abandonment, false imprisonment, and fraud.
03.03	Demonstrate procedures for accurate documentation and record keeping.
03.04	Interpret healthcare facility policy and procedures.
03.05	Explain the patients' "Bill of Rights”.
03.06	Identify and implement standards of the Health Insurance Portability and Accountability Act (HIPAA) and apply these standards to social media and the use of personal electronic devices in the workplace.
03.07	Distinguish between expressed, implied, and informed consent.
03.08	Explain the laws governing harassment, labor, and employment.
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03.10	Describe the dental profession’s Code of Ethics with emphasis on the dental assisting profession.
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03.12	Recognize the limits of authority and responsibility of dental health care workers, including legislated scope of practice.
03.13	Recognize and report illegal and/or unethical practices of dental health care workers.
03.14	Recognize various forms of abuse (i.e., trafficking, domestic violence, and neglect).
03.15	Demonstrate an understanding of reporting requirements for all types of abuse.
03.16	Identify resources for victims of abuse.
03.17	Explain risk management and root cause analysis.
03.18	Define commonly used legal vocabulary relating to dentistry.

	03.19 Describe ethical considerations/obligations in the dental team-patient relationship.
	03.20 Apply self-assessment skills to prepare for lifelong learning.
	03.21 Apply ethical principles, legal, and regulatory concepts to resolve ethical dilemmas.
04.0	Demonstrate an understanding of general anatomy and physiology and apply wellness and disease concepts. The student will be able to:
	04.01 Develop a basic understanding of the structure and function of the body systems.
	04.02 Identify common disorders related to each of the body systems.
	04.03 Identify and develop a control plan to address the issues of positive self-image, wellness, and stress.
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	05.04 Recognize Safety Data Sheets (SDS) and Globally Harmonized System (GHS) labels and comply with safety signs, symbols, and labels.
	05.05 Demonstrate procedures for the safe transport and transfer of patients.
	05.06 Describe workplace preparedness and procedures for fire safety, disaster, and evacuation.
	05.07 Explain emergency procedures to follow for responding to, reporting, and recording workplace accidents and acts of violence.
	05.08 Demonstrate handwashing and the use of personal protective equipment used in dentistry.
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	06.01 Take and record vital signs.
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	06.03 Obtain and maintain certification in basic life support (BLS), cardiopulmonary resuscitation (CPR), automated external defibrillator (AED), foreign body airway obstruction (FBAO), and first aid.
07.0	Use information technology tools. The student will be able to:
	07.01 Define terms and demonstrate basic computer skills.

	07.02 Interpret information from electronic medical documents.
08.0	Explain the importance of employability skills. The student will be able to:
	08.01 Identify personal traits or attitudes desirable in a member of the healthcare team.
	08.02 Exemplify basic professional standards of dental healthcare workers/providers as they apply to hygiene, dress, language, confidentiality, and behavior (i.e., telephone etiquette, courtesy, and self-introductions).
	08.03 Examine levels of education, credentialing requirements, including licensure and certification, employment opportunities, workplace environments, and career growth potential.
09.0	Demonstrate knowledge of airborne and blood-borne diseases. The student will be able to:
	09.01 Recognize emerging diseases and disorders.
	09.02 Demonstrate knowledge of the transmission and treatment of diseases caused by airborne and blood-borne pathogens, infectious agents, and organisms.
	09.03 Identify "at risk" behaviors that promote the spread of infectious diseases caused by airborne and blood-borne pathogens and the public education necessary to combat the spread of these diseases.
	09.04 Identify community resources and services available to individuals with diseases caused by airborne and blood borne pathogens.
	09.05 Apply infection control techniques designed to prevent the spread of diseases caused by airborne and blood borne pathogens to the care of all patients following the Centers for Disease Control and Prevention (CDC) guidelines.
	09.06 Demonstrate knowledge of the legal aspects of patient privacy, standard precautions, and incident reporting protocols.
	09.07 Demonstrate knowledge of the legal aspects of treating patients with infectious diseases, including testing and proper documentation.
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	10.02 Recognize factors and situations that may lead to conflict.
	10.03 Demonstrate effective problem-solving techniques for managing team conflict.
11.0	Use dental terminology. The student will be able to:
	11.01 Identify and define common dental terms.
	11.02 Demonstrate the use of proper dental terminology in the dental environment.
12.0	Identify structures and explain functions and pathologies of dental and general head and neck anatomy. The student will be able to:
	12.01 Identify structures and functions of the head and neck anatomy, including bones, muscles, sinuses, salivary glands, lymph nodes, nerves, and blood vessels.

	12.02 Identify embryonic development of the head, oral cavity, and teeth.
	12.03 Identify teeth and their landmarks, and the morphological characteristics of each individual tooth.
	12.04 Describe the histological components of the head, oral cavity, and elements of the teeth and supporting structures.
	12.05 Recognize and describe oral pathological conditions related to the teeth and their supporting structures.
	12.06 Recognize and describe developmental anomalies related to the teeth, face, and oral structures.
	12.07 Describe and differentiate between occlusion and malocclusion.
	12.08 Discuss the adverse effects of the use of alcohol, tobacco, and both legal and illegal drugs on the oral cavity.
13.0	Identify principles of microbiology, disease transmission, disease prevention and perform infection control procedures. The student will be able to:
	13.01 Differentiate between pathogenic and non-pathogenic microorganisms.
	13.02 Describe pathogens and modes of disease transmission.
	13.03 Differentiate between aseptic and non-aseptic environments.
	13.04 Perform aseptic handwashing technique.
	13.05 Describe, apply, and differentiate between methods of pre-cleaning, disinfection, and sterilization of the dental environment.
	13.06 Identify chemicals and their uses for controlling the spread of disease in the dental environment.
	13.07 Identify and practice the current CDC guidelines for infection control in dental healthcare settings.
	13.08 Describe the duties of the dental office safety coordinator.
	13.09 Demonstrate compliance with the OSHA Blood Borne Pathogens Standard (29CFR-1910.1030) applicable to the dental office environment.
	13.10 Identify and manage hazardous chemicals and biomedical wastes in accordance with the OSHA Hazard Communications Standard (29CFR-1910.1200), 64E-16 F.A.C., and Environmental Protection Agency regulations.
	13.11 Define principles of infection control including standard and transmission-based precautions.
	13.12 Demonstrate knowledge of dental asepsis within the dental environment.
	13.13 Implement appropriate hand hygiene procedures and use of personal protective equipment.
	13.14 Demonstrate knowledge of surgical asepsis and isolation.

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14.01	Identify various types, functions, and operations of dental operatory and laboratory equipment.
14.02	Identify types and functions of operative, restorative, surgical, prosthodontic, periodontic, orthodontic and endodontic dental instruments.
14.03	Maintain dental operatory equipment and instruments.
14.04	Identify types and functions of specific dental hygiene instruments with emphasis on category rather than individual instruments.
14.05	Seat and dismiss patients.
14.06	Operate oral evacuation devices and air/water syringe.
14.07	Maintain a clear field of vision including isolation techniques.
14.08	Perform a variety of instrument transfers to include four-handed dentistry.
14.09	Utilize appropriate chairside assistant ergonomics.
14.10	Assist with and place dental dams as permitted by Florida Statute and Florida Board of Dentistry Rule.
15.0	Record patient assessment and treatment data. The student will be able to:
15.01	Take and record medical, health, and dental histories.
15.02	Record assessment of existing oral conditions.
15.03	Perform intraoral and extraoral photography.
15.04	Record conditions diagnosed by the dentist.
15.05	Record treatment-related data on the patient’s clinical record.
15.06	Record treatment plan and treatment in patient’s chart.
15.07	Perform a visual assessment of existing oral conditions.
15.08	Distinguish between and report subjective, objective, indications, and contraindication information.
15.09	Report relevant information in order of occurrence.
16.0	Identify the functions of pharmacology and anesthesia as they relate to dentistry. The student will be able to:
16.01	Identify drug requirements, agencies, and regulations including prescribing regulations related to medications subject to addiction.

16.02	Distinguish among the five schedules of controlled substances.
16.03	Record a drug/medication prescription in a patient's chart.
16.04	Understand ratios and proportional problems to calculate prescribed drug dosages as instructed by the dentist.
16.05	Identify drug/medicaments actions, metabolism, side effects, indications, and contraindications; verify with Physician's Desk Reference (PDR) or its equivalent.
16.06	Identify pharmaceuticals and medicaments used in dentistry.
16.07	Identify the tissues innervated by each of the nerves associated with dental local and topical anesthetic to prepare and apply topical anesthetic agent.
16.08	Identify properties of anesthetics.
16.09	Prepare syringes for the administration of local anesthetics.
16.10	Monitor and identify precautions in the use of nitrous oxide-oxygen conscious sedation.
16.11	Understand the calculations of nitrous oxide-oxygen delivered by the dentist during a conscious sedation procedure.
16.12	Identify drugs and agents used for treating dental-related infection.
16.13	Identify and respond to dental office emergencies.
16.14	Describe the signs and symptoms of drug addiction. Recognize specific conditions in the oral cavity that may be caused by pharmaceutical agents.
16.15	Discuss the dental team's responsibility to recognize patients with drug addictions.
17.0	Identify and perform dental radiographic procedures using current technology. The student will be able to:
17.01	Describe the history, physics, and biological effects of ionizing radiation.
17.02	Identify parts of the radiography machine, including accessories.
17.03	Demonstrate radiologic health protection techniques.
17.04	Place and expose dental radiographic images on digital image receptors.
17.05	Perform extraoral radiography as required for dental diagnostic procedures.
17.06	Describe and identify radiographic anatomical landmarks and pathologies.
17.07	Mount radiographic images.

	17.08 Describe how to maintain digital image receptors and/or image devices.
	17.09 Maintain digitally acquired radiographic images.
	17.10 Practice infection control procedures for all radiographic procedures.
18.0	Identify properties and uses and manipulate dental materials. The student will be able to:
	18.01 Identify properties and uses and manipulate gypsum.
	18.02 Identify properties and uses and manipulate restorative materials.
	18.03 Identify properties and uses and manipulate dental cements.
	18.04 Place and remove matrices as permitted by Florida Statute and Florida Board of Dentistry Rule.
	18.05 Place and remove temporary restorations as permitted by Florida Statute and Florida Board of Dentistry Rule.
	18.06 Identify properties and uses and manipulate impression materials.
	18.07 Make intraoral impressions as permitted by Florida Statute and Florida Board of Dentistry Rule.
	18.08 Identify properties and uses and manipulate acrylics and thermoplastic materials.
	18.09 Identify properties and uses and manipulate waxes.
	18.10 Perform dental laboratory procedures to include the fabrication of casts, custom trays, whitening trays, temporary crowns, and bridges.
	18.11 Identify and manage hazardous dental materials and wastes in accordance with the OSHA Hazard Communications Standard (29CFR-1910.1200) and Environmental Protection Agency regulations.
	18.12 Employ measurements of time, temperature, distance, capacity, and mass/weight during the manipulation of dental materials.
19.0	Perform chairside assisting for general dentistry and specialty procedures. The student will be able to:
	19.01 Describe procedures, equipment, materials, and instrumentation used in the dental specialties to include but not limited to periodontics, endodontics, pedodontics, oral and maxillofacial specialties, orthodontics, prosthodontics, dental radiology, pathology, oral implantology, dental anesthesia, dentofacial orthopedics, and oral medicine.
	19.02 Assemble tray set-ups for general and specialty dental procedures.
	19.03 Assist in general and specialty dental procedures.
	19.04 Describe the special needs of patients during dental procedures.
	19.05 Perform patient education to include pre- and post-operative instructions as prescribed by a dentist.

	19.06 Describe procedures, equipment, and materials utilized in digital dentistry to include CAD/CAM and intraoral scanning technology.
	19.07 Identify, describe, and demonstrate the uses and principles of phlebotomy as they pertain to dentistry.
	19.08 Identify, describe, and demonstrate the properties, uses, and principles of autologous blood concentrates as they pertain to dentistry.
20.0	Describe principles and perform techniques of preventive dentistry. The student will be able to:
	20.01 Describe the process of oral biofilm formation and its management through preventative dentistry.
	20.02 Provide patient preventive education and oral hygiene instruction.
	20.03 Identify, communicate, and instruct patients on applicable methods of preventative dentistry that utilize: • Risk assessment • Evidence-based learning • Individualized preventive care plans • Motivational interviewing/counseling
	20.04 Training regarding health status and rationale for a preventive care plan.
	20.05 Prepare and set up for various preventative procedures.
	20.06 Identify properties and uses of abrasive agents used to polish coronal surfaces and appliances.
	20.07 Perform coronal polish and apply anticariogenic and desensitizing treatments as permitted by Florida Statute and Florida Board of Dentistry Rule.
	20.08 Clean and polish removable dental appliances.
	20.09 Apply dental sealants as permitted by Florida Statute and Florida Board of Dentistry Rule.
	20.10 Identify the elements of nutrition, basic food groups, and acceptable diets as recommended by the U.S. Department of Agriculture.
	20.11 Identify dietary deficiencies and dietary practices that contribute to the manifestation of symptoms in the oral cavity.
	20.12 Describe the metabolism of nutrient foods, vitamins, and minerals by the human body and pathological conditions related to nutrient deficiencies.
	20.13 Identify community dental resources and services available.
21.0	Perform general dental business office procedures. The student will be able to:
	21.01 Maintain appointment control.
	21.02 Assess, create, modify, and maintain an active re-care system.

	21.03 Prepare and maintain accurate patient records.
	21.04 Prepare and maintain patient financial records and collect fees.
	21.05 Demonstrate the use of dental procedure codes and current terminology when preparing and managing insurance claims.
	21.06 Differentiate the different categories of dental procedure codes.
	21.07 Prepare and maintain dental office inventory control and purchasing.
	21.08 Demonstrate public relations responsibilities of the secretary/receptionist.
	21.09 Demonstrate skills on office equipment to include computers and dental office management practice software.
	21.10 Maintain the dental business office environment.
	21.11 Receive and dismiss patients and visitors.
	21.12 Demonstrate appropriate patient management/customer service skills.
	21.13 Demonstrate and maintain office financial records and budgets
	21.14 Describe the effect of money management on practice goals.
22.0	Demonstrate professionalism as a dental team member in the clinical setting. The student will be able to:
	22.01 Perform dental assisting duties, dental assisting expanded functions, and dental radiographic procedures in a clinical setting under the direct supervision of a licensed dentist.
	22.02 Interact with a professional dental team in the delivery of patient services.
	22.03 Utilize employability skills.
	22.04 Develop and maintain a professional portfolio to document knowledge, continued education, skills, and experience.
	22.05 Write an appropriate resume.
	22.06 Conduct a job search and complete a job application correctly.
	22.07 Demonstrate effective job interview techniques.
	22.08 Examine levels of education, credentialing requirements, including licensure and certification, employment opportunities, workplace environments, and career growth potential.

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as, experimental, quality, and safety procedures are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate and troubleshoot equipment/tools used to make observations. Students understand measurement error; and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

Field Internship Activities: Clinical experiences are integrated with the didactic portion of this program. Clinical experience assisting a dentist must be an integral part of the educational program designed to perfect students' competence in performing dental assisting functions, rather than to provide basic instruction. The major portion of the students' time in clinical assignments must be spent assisting with or participating in patient care. Prior to clinical assignments, students demonstrate minimum competence in performing the procedures which they will be expected to perform in their clinical experience.

Special Notes

Dental assisting programs accredited by the American Dental Association Commission on Dental Accreditation are required to implement enrollment and admissions criteria that include the selection of adult students with a high school diploma, its equivalent, or an advanced degree.

This program focuses on broad, transferable skills and stresses understanding and demonstration of the following elements of the health care industry; planning, management, finance, technical and production skills, underlying principles of technology, labor issues, community issues and health, safety, and environmental issues.

This program meets the goals of TECH PREP and is based on the model developed by the Allied Health Articulation Task Force.

This program should meet the most current edition of the American Dental Association Accreditation Standards for Dental Assisting Education Programs. For further information, contact: Commission on Dental Accreditation, 211 East Chicago Avenue, Chicago, Illinois 60611.

For Florida information contact the Florida Agency for Health Care Administration (AHCA), Division of Health Quality Assurance, Board of Dentistry, 4052 Bald Cypress Way, Tallahassee, FL 32399, 850/245-4161.

This program meets the Department of Health's education requirements for HIV/AIDS, Domestic Violence and Prevention of Medical Errors. Although not a requirement for initial licensure, it is a requirement for renewal, therefore the instructor **may** provide a certificate for renewal purposes to the student verifying these requirements have been met.

If students in this program are seeking a licensure, certificate, or registration through the Department of Health, please refer to 456.0635, F.S. for more information on disqualification for a license, certificate, or registration through the Department of Health.

Pursuant to 466.024, F.S., 64B5-16.002, F.A.C. and 64B5-9.011, F.A.C., completers of the dental assisting program may be awarded a certificate verifying formal training which is required for the performance of certain remediable tasks (also known as expanded functions.)

Students should be encouraged to become members and participate in the activities of the professional organization: The American Dental Assistants Association.

Completers of the dental assisting program should be encouraged to take the Dental Assisting National Board (DANB) Certified Dental Assistant (CDA) exam. DANB is recognized by the American Dental Association as the national certification board for dental assistants.

Career and Technical Student Organization (CTSO)

CTSOs are co-curricular career and technical student organizations providing leadership training and reinforcing specific career and technical skills. Career and Technical Student Organizations provide activities for students as an integral part of the instruction offered. Other CTSOs not listed in this curriculum framework or recognized by the Florida Department of Education are permissible provided they support student mastery over the standards and benchmarks of this curriculum framework.

Basic Skills

In Career Certificate programs offered for 450 hours or more, in accordance with Rule 6A-10.040, F.A.C., the minimum basic skills grade levels required for postsecondary adult career and technical students to complete this program are: Computation (Mathematics) and Communications (Reading and Language Arts). These grade level numbers correspond to a grade equivalent score obtained on a state designated basic skills examination.

Adult students with disabilities, as defined in Section 1004.02, Florida Statutes, may be exempted from meeting the Basic Skills requirements (Rule 6A-10.040). Students served in exceptional student education (except gifted) as defined in s. 1003.01, F.S., may also be exempted from meeting the Basic Skills requirement. Each school district and Florida College System Institution must adopt a policy addressing procedures for exempting eligible students with disabilities from the Basic Skills requirement as permitted in Section 1004.91, F.S.

Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology, and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

Note: postsecondary curriculum and regulated secondary programs cannot be modified.

Program Length

In accordance with Rule 6A-10.024, F.A.C. an ATD program consists of a course of study that is part of an AS or AAS degree program, is less than 60 credit hours, is approximately 50% of the technical component (non-general education) and leads to employment in a specific occupation. An ATD program may consist of either technical credit or college credit.

Students must have a high school diploma, a GED, or a certificate of completion to be admitted to an ATD program. Within six weeks of entry, students in ATD programs of 450 or more hours must be tested pursuant to Rule 6A-10.040, F.A.C. and if below minimum standards for completion from the program, must receive remedial instruction. The minimum standards must be at least the equivalent of a score of ten (10) on all sections of basic skills test approved in Rule 6A-10.040, F.A.C. Students must successfully complete all remedial instruction before completing the ATD.

Community Colleges may offer either college or career credit toward the ATD. A Career Center in a public school district may offer an ATD program only as technical credit, with college credit awarded to a student upon articulation to a community college (Section 1004.02, F.S.)

When offered at a community college the standard length of this program is 50 credits. When offered at a technical center the standard length of this program is 1230 clock hours.

In accordance with Rule 6A-10.024, F.A.C. all faculty providing instruction must have at least a baccalaureate degree or an associate degree with demonstrated competencies in the specific instructional program as defined by the Southern Association of Colleges and Schools.

Florida Department of Education
Curriculum Framework

The standards and benchmarks for this program were updated for the 2026-27 academic year.

Program Title: **Healthcare Services Specialist**
Career Cluster: **Health Science**

College Credit Certificate	
CIP Number	0351070102
Program Type	College Credit Certificate (CCC)
Program Length	27 credit hours
CTSO	HOSA
SOC Codes (all applicable)	For program SOC codes, please see the Program and Course Tables section of the CTE Program Resources page linked below.
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml

Purpose

This certificate program is part of the Health Services Management AS degree program (1351070101).

A College Credit Certificate consists of a program of instruction of less than sixty (60) credits of college-level courses, which is part of an AS or AAS degree program and prepares students for entry into employment (Rule 6A-14.030, F.A.C.).

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Health Science career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of Health Science career cluster.

The purpose of this program is to prepare students for employment as Healthcare Services supervisor assistants in medicine and health service management (Medical and Health Services Managers). This program is for individuals who are currently employed in the health field or seeking employment in entry-level management positions in the health field.

The content includes but is not limited to laws and regulations pertaining to health care facilities and agencies, organizational structure of health care facilities, making employee assignments and scheduling, legal aspects of healthcare, health and safety, including CPR, and employability skills.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Program Structure

When developing the course sequence for the local implementation of this program, select courses that:

- Meet the skill development requirements of the standards and benchmarks of this program.
- Where reasonable and practicable, align with programs offered by your institution or other postsecondary institutions in Florida, including:
    - Related AS and AAS degrees.
    - Baccalaureate degrees within the same career pathway and/or Federal CIP code.

Visit FloridaShines' Discover Programs website to identify other institutions that offer similar programs to review their course sequencing. Where appropriate, course alignment between institutions offering related programs can facilitate interagency student articulation.

Visit FloridaShines' Common Prerequisites Manual to identify courses that are prerequisites for admission into an upper division program. When sub-baccalaureate courses are aligned to the course admissions requirements of baccalaureate programs with the same career pathway, students can enter upper division coursework seamlessly.

Florida's Career Readiness Skills for CTE Programs

Employability Skills	
01.0	Apply academic skills to workplace scenarios.
01.01	Use reading skills.
01.02	Use writing skills.
01.03	Use mathematical strategies and procedures.
01.04	Use scientific principles and procedures.
02.0	Design a solution to an industry problem.
02.01	Use critical thinking.
02.02	Use creativity.
02.03	Make sound decisions.
02.04	Solve problems.
02.05	Reason.
02.06	Plan and organize.
03.0	Manage resources within an industry project
03.01	Manage time.
03.02	Manage money or resources.
03.03	Manage materials.
03.04	Manage personnel.
04.0	Oversee the subcomponents, operations and output of a technical or organizational system.
04.01	Manage systems.
04.02	Monitor systems.
04.03	Improve systems.
05.0	Use information for decision making.
05.01	Locate information.
05.02	Organize information.
05.03	Use information.

	05.04 Analyze information.
	05.05 Communicate information.
06.0	Apply relevant technology to workplace scenarios to aid productivity.
	06.01 Use technology.
07.0	Interpret and express interpersonal communication.
	07.01 Communicate verbally.
	07.02 Listen actively.
	07.03 Comprehend written material.
	07.04 Convey information in writing.
	07.05 Communicate nonverbally.
	07.06 Interpret nonverbal communication.
08.0	Interact with others to accomplish workplace goals.
	08.01 Collaborate with others in a team.
	08.02 Respond to customer needs.
	08.03 Exercise leadership.
	08.04 Negotiate to resolve conflict.
	08.05 Respect others.
09.0	Manage personal behavior to maximize productivity and professional growth.
	09.01 Demonstrate responsibility and self-discipline.
	09.02 Adapt and show flexibility.
	09.03 Work independently.
	09.04 Demonstrate a willingness to learn.
	09.05 Demonstrate integrity.
	09.06 Demonstrate professionalism.
	09.07 Take initiative.
	09.08 Display positive attitude.
	09.09 Take responsibility for professional growth.

Job Attainment	
10.0	Find, assess and apply to job opportunities.
10.01	Identify online job posts relevant to his or her career aspirations.
10.02	Compare and contrast the job posts' required qualifications, job duties, compensation, benefits and employers.
10.03	Define what information, documentation and writing prompts are required for the positions.
11.0	Communicate personal competence, character and fit for a job opportunity.
11.01	Develop a resume.
11.02	Write a cover letter.
11.03	Curate a professional portfolio that includes work products.
11.04	Prepare for and experience a mock job interview.
12.0	Cultivate and leverage relationships to professionally advance.
12.01	Request a signed reference letter, letter of recommendation and/or an online skill/professionalism endorsement.
12.02	Develop a plan to cultivate a professional digital footprint.
12.03	Develop a networking plan for a specific industry of interest.

Standards

After successfully completing this program, the student will be able to perform the following:

01.0 Demonstrate knowledge of the healthcare delivery system and health occupations.
02.0 Demonstrate the ability to communicate and use interpersonal skills effectively.
03.0 Demonstrate legal and ethical responsibilities.
04.0 Recognize and practice safety standards and security procedures.
05.0 Demonstrate information technology applications in healthcare.
06.0 Demonstrate employability skills.
07.0 Demonstrate basic knowledge of medical language, anatomy and physiology, and disease processes.
08.0 Demonstrate knowledge of materials and supplies needed in healthcare settings.
09.0 Demonstrate knowledge of the economics involved in healthcare.

Florida Department of Education
Student Performance Standards

Program Title: **Healthcare Services**
CIP Number: **0351070201**
Program Length: **27 credit hours**

This certificate program is part of the Health Services Management AS degree program (1351070101). At the completion of this program, the student will be able to:	
01.0	Demonstrate knowledge of the healthcare delivery system and health occupations. The student will be able to:
01.01	Identify the basic components of the health care delivery system, including public, private, government, and non-profit.
01.02	Identify types of healthcare settings.
01.03	Identify the consumer perspective regarding healthcare.
01.04	Describe the composition and functions of a systemic healthcare team, including those not based in the healthcare facility (e.g., medical device representative and insurance claims adjuster).
01.05	Explain challenges impacting emerging issues, including technology, bioethics, and socioeconomics, on healthcare delivery systems.
02.0	Demonstrate the ability to communicate and use interpersonal skills effectively. The student will be able to:
02.01	Develop fundamental speaking and active listening skills.
02.02	Demonstrate effective verbal and written communication skills.
02.03	Recognize communication styles and barriers to utilize the most effective communication technique based on the situation.
02.04	Demonstrate appropriate situational communication by considering lifestyles, medical conditions, and generational and cultural differences.
02.05	Identify characteristics of effective teams and techniques for managing team conflict.
02.06	Use factual data to produce and deliver reliable and valid reports.
03.0	Demonstrate legal and ethical responsibilities. The student will be able to:
03.01	Identify illegal and unethical practices in the healthcare setting (e.g., liability, negligence, abandonment, false imprisonment, and fraud).
03.02	Explain the legal responsibilities of the consumer within the healthcare delivery system.
03.03	Explain the “Patient’s Bill of Rights.”

03.04	Identify the history, applications, and violations of the Health Insurance Portability and Accountability Act (HIPAA).
03.05	Recognize advance directives that allow patients and/or their legal guardians to document end-of-life care decisions.
03.06	Describe the informed consent process.
03.07	Differentiate between legal and ethical issues in healthcare and the key components of personal, professional, and organizational ethics.
03.08	Recognize responsibilities and reporting protocols within legal, ethical, and illegal practices.
03.09	Describe federal, state, and local institutional requirements.
03.10	Discuss the impact of current legislation changes on healthcare facilities.
04.0	Recognize and practice safety standards and security procedures. The student will be able to:
04.01	Recognize national and accrediting agency patient safety standards and the necessary protocols to mitigate, manage, and report safety hazards.
04.02	Explain how medical errors might occur and describe ways to prevent or mitigate such errors.
04.03	Demonstrate an understanding of the roles and responsibilities of the healthcare professional during manmade and natural disasters.
04.04	Identify risk management in healthcare settings.
04.05	Identify mandatory requirements regarding environmental health and safety standards in healthcare organizations.
05.0	Demonstrate information technology applications in healthcare. The student will be able to:
05.01	Demonstrate the ability to use a computer to perform business practices such as word processing, spreadsheets, presentations, and database management.
05.02	Recognize current and changing technology applications in healthcare.
05.03	Discuss methods of communication to access and distribute data, including patient portal, electronic messaging, Continuity of Care Documents (CCD), and Health Information Exchanges (HIE).
05.04	Interpret technological capabilities and challenges of Electronic Health Records (EHR) and applications in healthcare.
05.05	Demonstrate how health information is used for institutional and patient strategic planning, outcome assessment, and quality improvement.
05.06	Identify protected Patient Health Information (PHI) and methods for preventing PHI breaches and technology security.
05.07	Explain Meaningful Use as it relates to privacy, security, and access of patients' records.
06.0	Demonstrate employability skills. The student will be able to:

	06.01 Identify personal traits or attributes required to succeed as a member of the healthcare team.
	06.02 Demonstrate basic professional standards of healthcare workers as they apply to hygiene, dress, communication, and behavior (e.g., telephone, texting, email etiquette, social media, and professionalism).
	06.03 Model the process to seek employment, including but not limited to job search, cover letter, application, interview, and thank you letter.
07.0	Demonstrate basic knowledge of medical language, anatomy and physiology, and disease processes. The student will be able to:
	07.01 Demonstrate knowledge of medical and clinical terminology related to healthcare.
	07.02 Describe the structure and function of different body systems.
	07.03 Demonstrate an understanding of the fundamentals of the disease process in relation to the human body.
08.0	Demonstrate knowledge of materials and supplies needed in healthcare settings. The student will be able to:
	08.01 Demonstrate a working knowledge of an effective inventory management system.
	08.02 Identify accounts payable practices (e.g., purchase orders and processing).
09.0	Demonstrate knowledge of the economics involved in healthcare. The student will be able to:
	09.01 Identify common methods, benefits, and challenges of payment for healthcare services.
	09.02 Demonstrate knowledge of reimbursement methodologies for healthcare services.
	09.03 Identify billing and insurance terminology.
	09.04 Demonstrate understanding of the process of utilization review.
	09.05 Demonstrate effective practices in accounts receivable and reimbursement systems.
	09.06 Demonstrate knowledge of third-party reimbursements, including Center for Medicare/Medicaid Services (CMS) rulings and precedence to other payers.
	09.07 Demonstrate basic knowledge of the procedures and purposes of medical documentation, medical billing, and coding.
	09.08 Demonstrate knowledge of the revenue cycle.
	09.09 Explain government impacts to reimbursement (i.e., value-based payment models, government incentive programs, self-pay models, and HCAPS scores).
	09.10 Identify volume and growth strategies for healthcare agencies.

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as experimental, quality, and safety procedures are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate and troubleshoot equipment/tools used to make observations. Students understand measurement error and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

It is strongly recommended that hands-on practical experience be an integral part of the program.

Special Notes

If students in this program are seeking a licensure, certificate, or registration through the Department of Health, please refer to 456.0635, F.S., for more information on disqualification for a license, certificate, or registration through the Department of Health.

The Health Care Services Program, with emphasis on middle management skills, is a complex program requiring current knowledge in both health care and legislation affecting the health care delivery system. Instruction disciplines can come from a variety of fields.

To augment the program areas, community leaders possessing expertise in specific health care areas may be utilized.

Career and Technical Student Organization (CTSO)

CTSOs are co-curricular career and technical student organizations providing leadership training and reinforcing specific career and technical skills. Career and Technical Student Organizations provide activities for students as an integral part of the instruction offered. Other CTSOs not listed in this curriculum framework or recognized by the Florida Department of Education are permissible provided they support student mastery over the standards and benchmarks of this curriculum framework.

Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology, and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

Florida Department of Education
Curriculum Framework

The standards and benchmarks for this program were updated for the 2026-27 academic year.

Program Title: **Healthcare Informatics Specialist**
Career Cluster: **Health Science**

College Credit Certificate	
CIP Number	0351070712
Program Type	College Credit Certificate (CCC)
Program Length	24 credit hours
CTSO	HOSA
SOC Codes (all applicable)	For program SOC codes, please see the Program and Course Tables section of the CTE Program Resources page linked below.
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml

Purpose

This certificate program is part of the Health Information Technology AS degree program (1351070700).

A College Credit Certificate consists of a program of instruction of less than sixty (60) credits of college-level courses, which is part of an AS or AAS degree program and prepares students for entry into employment (Rule 6A-14.030, F.A.C.).

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Health Science career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of Health Science career cluster.

This program is designed to prepare students for employment as entry-level Healthcare Informatics Specialists or to provide supplemental training for persons previously or currently employed in related health record or information technology occupations.

The content includes but is not limited to biomedical sciences, medical terminology, healthcare delivery systems, basic principles of healthcare informatics, electronic health/medical record systems, data and workflow management concepts, and project management skills specific to healthcare informatics, ethical and legal concepts, health data content, and employability skills.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Program Structure

When developing the course sequence for the local implementation of this program, select courses that:

- Meet the skill development requirements of the standards and benchmarks of this program.
- Where reasonable and practicable, align with programs offered by your institution or other postsecondary institutions in Florida, including:
    - Related AS and AAS degrees.
    - Baccalaureate degrees within the same career pathway and/or Federal CIP code.

Visit FloridaShines' Discover Programs website to identify other institutions that offer similar programs to review their course sequencing. Where appropriate, course alignment between institutions offering related programs can facilitate interagency student articulation.

Visit FloridaShines' Common Prerequisites Manual to identify courses that are prerequisites for admission into an upper division program. When sub-baccalaureate courses are aligned to the course admissions requirements of baccalaureate programs with the same career pathway, students can enter upper division coursework seamlessly.

Florida's Career Readiness Skills for CTE Programs

Employability Skills	
01.0	Apply academic skills to workplace scenarios.
01.01	Use reading skills.
01.02	Use writing skills.
01.03	Use mathematical strategies and procedures.
01.04	Use scientific principles and procedures.
02.0	Design a solution to an industry problem.
02.01	Use critical thinking.
02.02	Use creativity.
02.03	Make sound decisions.
02.04	Solve problems.
02.05	Reason.
02.06	Plan and organize.
03.0	Manage resources within an industry project
03.01	Manage time.
03.02	Manage money or resources.
03.03	Manage materials.
03.04	Manage personnel.
04.0	Oversee the subcomponents, operations and output of a technical or organizational system.
04.01	Manage systems.
04.02	Monitor systems.
04.03	Improve systems.
05.0	Use information for decision making.
05.01	Locate information.
05.02	Organize information.
05.03	Use information.

	05.04 Analyze information.
	05.05 Communicate information.
06.0	Apply relevant technology to workplace scenarios to aid productivity.
	06.01 Use technology.
07.0	Interpret and express interpersonal communication.
	07.01 Communicate verbally.
	07.02 Listen actively.
	07.03 Comprehend written material.
	07.04 Convey information in writing.
	07.05 Communicate nonverbally.
	07.06 Interpret nonverbal communication.
08.0	Interact with others to accomplish workplace goals.
	08.01 Collaborate with others in a team.
	08.02 Respond to customer needs.
	08.03 Exercise leadership.
	08.04 Negotiate to resolve conflict.
	08.05 Respect others.
09.0	Manage personal behavior to maximize productivity and professional growth.
	09.01 Demonstrate responsibility and self-discipline.
	09.02 Adapt and show flexibility.
	09.03 Work independently.
	09.04 Demonstrate a willingness to learn.
	09.05 Demonstrate integrity.
	09.06 Demonstrate professionalism.
	09.07 Take initiative.
	09.08 Display positive attitude.
	09.09 Take responsibility for professional growth.

Job Attainment	
10.0	Find, assess and apply to job opportunities.
10.01	Identify online job posts relevant to his or her career aspirations.
10.02	Compare and contrast the job posts' required qualifications, job duties, compensation, benefits and employers.
10.03	Define what information, documentation and writing prompts are required for the positions.
11.0	Communicate personal competence, character and fit for a job opportunity.
11.01	Develop a resume.
11.02	Write a cover letter.
11.03	Curate a professional portfolio that includes work products.
11.04	Prepare for and experience a mock job interview.
12.0	Cultivate and leverage relationships to professionally advance.
12.01	Request a signed reference letter, letter of recommendation and/or an online skill/professionalism endorsement.
12.02	Develop a plan to cultivate a professional digital footprint.
12.03	Develop a networking plan for a specific industry of interest.

Standards

After successfully completing this program, the student will be able to perform the following:

01.0 Demonstrate an understanding of healthcare organizations and health occupations.
02.0 Demonstrate the ability to communicate and use interpersonal skills effectively.
03.0 Explore health informatics as a health professional.
04.0 Apply knowledge of health data concepts.
05.0 Manage the adoption of multiple formats of health records and the function of digital applications.
06.0 Apply Health Information Technology principles.
07.0 Apply classification systems, clinical vocabularies, and terminologies.
08.0 Evaluate ethical issues in Health Information professions.
09.0 Demonstrate compliance with laws, regulations, and standards that impact healthcare.
10.0 Apply policies, regulations, and standards to the management of information associated with treatment, payment, and operations (TPO).
11.0 Demonstrate computer knowledge and skills.
12.0 Demonstrate employability skills.
13.0 Examine the various informatics and data analytics-related disciplines.
14.0 Demonstrate ethical and legal principles with regard to the role of the informatics and data analytics specialist.
15.0 Apply appropriate resources in healthcare informatics and data analytics to retrieve and analyze relevant information.
16.0 Manage health data processes and systems.
17.0 Analyze healthcare data to support research and performance improvement initiatives.
18.0 Perform appropriate information technology system functions.
19.0 Perform project management principles and best practices.
20.0 Collaborate in the planning, design, selection, implementation, integration, testing, and support of health information systems.
21.0 Integrate healthcare informatics and data analytics skills through practical lab experiences.

Florida Department of Education
Student Performance Standards

Program Title: **Healthcare Informatics Specialist**
CIP Number: **0351070712**
Program Length: **24 credit hours**

This certificate program is part of the Health Information Technology AS degree program (1351070700). At the completion of this program, the student will be able to:	
01.0	Demonstrate knowledge of the healthcare delivery system and health occupations. The student will be able to:
01.01	Identify the basic components of the healthcare delivery system, including public, private, government, and non-profit.
01.02	Identify types of healthcare settings.
01.03	Identify the consumer perspective regarding healthcare.
01.04	Describe the composition and functions of a systemic healthcare team, including those not based in the healthcare facility (e.g., medical device representative and insurance claims adjuster).
01.05	Explain challenges impacting emerging issues, including technology, bioethics, and socioeconomics, on healthcare delivery systems.
02.0	Demonstrate the ability to communicate and use interpersonal skills effectively. The student will be able to:
02.01	Apply basic speaking and active listening skills with meaningful feedback.
02.02	Identify characteristics of successful and unsuccessful communication, including barriers.
02.03	Demonstrate emotional intelligence (e.g., recognize verbal and non-verbal cues).
02.04	Demonstrate effective professional communication using correct spelling, grammar, formatting, and confidentiality.
02.05	Use appropriate medical terminology and abbreviations.
02.06	Promote health information training and awareness to internal/external stakeholders.
02.07	Model communication skills to varied levels of understanding and cultural orientation, including generational differences, cultural, socioeconomic, ethnic, and religious groups.
02.08	Distinguish between subjective and objective information.
03.0	Explore health informatics as a health professional. The student will be able to:
03.01	Discuss the past, present, and future of health information.

	03.02 Examine professional opportunities related to health information.
	03.03 Demonstrate knowledge of industry-recognized credentials and professional associations applicable to the field of health information.
04.0	Apply knowledge of health data concepts. The student will be able to:
	04.01 Examine various health data uses and data sets.
	04.02 Identify various characteristics of health data quality and emerging standards.
05.0	Manage the adoption of multiple formats of health records and the function of digital applications. The student will be able to:
	05.01 Apply regulations and requirements of health information to the continuum of care.
	05.02 Analyze health information related to treatment, payment, and operations (TPO).
06.0	Apply Health Information Technology principles. The student will be able to:
	06.01 Explain how changing regulations and technology impact the health information field.
	06.02 Validate the accuracy, integrity, and reliability of information from health information systems and applications in healthcare.
	06.03 Demonstrate proficiency and understanding of creation, use, storage, retrieval, and exchange of health data.
07.0	Apply classification systems, clinical vocabularies, and terminologies. The student will be able to:
	07.01 Demonstrate the use of classification systems, clinical vocabularies, terminologies, and nomenclatures.
08.0	Evaluate ethical issues in Health Information professions. The student will be able to:
	08.01 Interpret the industry-recognized code of ethics for healthcare information practices.
	08.02 Analyze ethical issues related to health information.
	08.03 Manage ethical issues related to treatment, payment, and operations.
09.0	Demonstrate compliance with laws, regulations, and standards that impact healthcare. The student will be able to:
	09.01 Advocate the importance of maintaining ethical and legal standards in gathering, securing, managing, and analyzing health information.
	09.02 Identify all regulations, laws, and standards that impact health information, including the Health Insurance Portability and Accountability Act (HIPAA
	09.03 Explain the composition of the legal health record.

	09.04 Apply health information policies and procedures for privacy, confidentiality, and security.
	09.05 Articulate legal terms and processes that impact healthcare.
10.0	Apply policies, regulations, and standards to the management of information associated with treatment, payment, and operations (TPO). The student will be able to:
	10.01 Describe how regulatory change impacts workflow.
	10.02 Demonstrate knowledge of policies and procedures for access and disclosure of protected health information to authorized users.
	10.03 Adhere to appropriate and applicable healthcare regulatory and accrediting agency guidelines.
11.0	Demonstrate computer knowledge and skills. The student will be able to:
	11.01 Demonstrate the ability to create, manage, organize, attach, and retrieve files.
	11.02 Demonstrate the ability to connect to and perform research using search engines and by identifying reputable websites.
	11.03 Demonstrate proficiency in word processing, spreadsheets, and presentation software.
	11.04 Demonstrate the ability to manage software programs.
	11.05 Demonstrate knowledge of safe computer practices and security procedures such as encryption, passwords, and biometrics.
12.0	Demonstrate employability skills. The student will be able to:
	12.01 Identify and exemplify professional traits desirable in a member of the healthcare team.
	12.02 Demonstrate professional standards of healthcare workers as they apply to hygiene, dress, language, and behavior (e.g., telephone and email etiquette, social media, courtesy, and self-introductions).
	12.03 Identify necessary documentation that may be required when applying for a healthcare position.
	12.04 Model the process to obtain employment, including but not limited to job search, cover letter, resume, application, interview, and thank you letter.
13.0	Examine the various informatics and data analytics-related disciplines. The student will be able to:
	13.01 Analyze the evolution, current state, and future trends of informatics and data analytics-related disciplines.
	13.02 Apply comprehensive knowledge of health data standards for the implementation of health information systems.
14.0	Demonstrate ethical and legal principles with regard to the role of the informatics and data analytics specialist. The student will be able to:
	14.01 Apply the Code of Ethics to informatics and data analytics as it relates to professional organizations.

	14.02 Identify the scope of work of the healthcare informatics and data analytics specialist, including ethical and legal responsibilities.
15.0	Apply appropriate resources in healthcare informatics and data analytics to retrieve and analyze relevant information. The student will be able to:
	15.01 Identify credible informatics and data analytics resources for retrieving and analyzing relevant information.
	15.02 Utilize case studies and best practices to analyze informatics and data analytics concepts.
16.0	Manage health data processes and systems. The student will be able to:
	16.01 Oversee the collection and maintenance of health data, data sets, quality indicators, and databases.
	16.02 Apply policies and procedures to health informatics and data analytics processes.
	16.03 Verify data quality, standards, and data sources for all health information systems across the continuum of care.
	16.04 Participate in database management such as data entry, data display design, and database language.
	16.05 Identify standards for the exchange of health information.
17.0	Analyze healthcare data to support research and performance improvement initiatives. The student will be able to:
	17.01 Analyze data for clinical indices/databases/registries.
	17.02 Model data as representative visual information to achieve desired outcomes.
	17.03 Calculate basic descriptive, institutional, and healthcare statistics.
	17.04 Examine common research methods in accordance with Institutional Review Board (IRB) processes and policies.
	17.05 Utilize technologies for trend analysis, end-user support, decision making, and strategic planning.
	17.06 Report data for facility-wide quality management and performance improvement programs.
18.0	Perform appropriate information technology system functions. The student will be able to:
	18.01 Perform graphical representations from healthcare data reports that have been accurately calculated, interpreted, and summarized using statistical software.
	18.02 Utilize specialized technologies and AI applications affiliated with treatment, payment, and operations (TPO).
	18.03 Apply policies and procedures to streamline the use of electronic health records (EHR), personal health records (PHRs), public health systems, and related applications and networks.
	18.04 Utilize knowledge of database modeling to address departmental needs.

	18.05 Facilitate the implementation, maintenance, and decommissioning of an information system or application.
	18.06 Perform database queries, analyses, and presentations of data to facilitate decision-making.
	18.07 Utilize tools and techniques for information retention, archiving, and destruction of information per state and federal regulations.
	18.08 Protect data integrity by preventing unauthorized access using software and hardware technologies.
19.0	Perform project management principles and best practices. The student will be able to:
	19.01 Demonstrate an understanding of the general principles and tools of informatics and data analytics project management.
	19.02 Demonstrate teamwork, resource allocation, and problem-solving skills in healthcare informatics and data analytics projects.
20.0	Collaborate in the planning, design, selection, implementation, integration, testing, and support of health information systems. The student will be able to:
	20.01 Apply appropriate data collection methods considering end user perspectives and needs.
	20.02 Demonstrate interoperability standards to ensure data sharing across systems.
	20.03 Identify technological and changing management issues and problem resolution associated with health information systems.
	20.04 Apply S.M.A.R.T. goals for projects using evidence-based information and research to inform decisions and justify actions.
	20.05 Analyze workflow within an electronic health record.
	20.06 Summarize the various types of information systems and their applications.
	20.07 Analyze problems, promote solutions, and encourage decision-making in implementing health information systems.
	20.08 Identify cybersecurity risks across physical, virtual, and network areas.
	20.09 Develop training materials for various individuals, groups, and populations.
	20.10 Identify health information system practices globally.
	20.11 Examine data generated from advanced digital applications to review the security, authenticity, or reliability of the data generated.
21.0	Integrate healthcare informatics and data analytics skills through practical lab experiences. The student will be able to:
	21.01 Demonstrate a health informatics and data analytics specialist role as a team leader or project manager.
	21.02 Apply knowledge and skills related to project management.
	21.03 Apply healthcare informatics, data analytics principles, and best practices in real-world scenarios.

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as, experimental, quality, and safety procedures are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate and troubleshoot equipment/tools used to make observations. Students understand measurement error; and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

Special Notes

The cooperative method of instruction or clinical rotation is appropriate for this program. Whenever these methods are offered, the following is required for each student: a training plan, signed by the student, teacher, and employer, which includes instructional objectives and a list of on-the-job and in-school learning experiences; and a work station which reflects equipment, skills, and tasks which are relevant to the occupation which the student has chosen as a career goal. The student may receive compensation for work performed.

Faculty teaching this program must have a minimum of an AS degree in Healthcare Informatics, Nursing, Health Information Management.

Students should be encouraged to become members and participate in the activities of the professional organizations: American Health Information Management Association (AHIMA), Healthcare Information and Management Systems Society (HIMSS), American Medical Informatics Association (AMIA), and other discipline-specific professional informatics organizations.

Outcomes 01-12 are referred to as the Health Information Technology core and do not have to be completed if the students has previously completed the core in another program at any level. The Core should be taken first in the program.

Career and Technical Student Organization (CTSO)

CTSOs are co-curricular career and technical student organizations providing leadership training and reinforcing specific career and technical skills. Career and Technical Student Organizations provide activities for students as an integral part of the instruction offered. Other CTSOs not listed in this curriculum framework or recognized by the Florida Department of Education are permissible provided they support student mastery over the standards and benchmarks of this curriculum framework.

Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as

instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

Florida Department of Education
Curriculum Framework

The standards and benchmarks for this program were updated for the 2026-27 academic year.

Program Title: **Medical Coder/Biller**
Program Type: **ATD (Applied Technology Diploma)**
Career Cluster: **Health Science**

	College Credit	Clock Hour
Program Number	N/A	H170530
CIP Number	0351071400	0351071405
Grade Level	Applied Technology Diploma (ATD)	30, 31
Program Length	37 credit hours	1110 clock hours
CTSO	HOSA	HOSA
SOC Codes (all applicable)	For program SOC codes, please see the Program and Course Tables section of the CTE Program Resources page linked below.	
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml	
Basic Skills Level:	N/A	Computation (Mathematics): 10 Communications (Reading and Language Arts): 11

Purpose

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Health Science career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of Health Science career cluster.

The program is designed to prepare students for employment in a variety of health care settings as entry-level coders, medical record coders, coding technicians, coding clerks, or medical coder/billers, or Medical Records and Health Information Technicians.

The content includes but is not limited to medical terminology, anatomy and physiology, coding systems, fundamentals of disease process, including pharmacology, health care delivery systems, basics of medical records services, ethical and legal responsibilities, safety/security procedures, basic data processing, and employability skills.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Program Structure

This program is an Applied Technology Diploma (ATD) program that is part of a technical degree program, has less than 60 credit hours, and leads to employment in a specific occupation. An ATD program may consist of either technical credit or college credit. A public school district may offer an ATD program only as clock hour credit, with college credit awarded to a student upon articulation to a state college.

When developing the course sequence for the local implementation of this program, select courses that:

- Meet the skill development requirements of the standards and benchmarks of this program.
- Where reasonable and practicable, align with programs offered by your institution or other postsecondary institutions in Florida, including:
  - Related AS and AAS degrees.
  - Baccalaureate degrees within the same career pathway and/or Federal CIP code.

Visit FloridaShines' Discover Programs website to identify other institutions that offer similar programs to review their course sequencing. Where appropriate, course alignment between institutions offering related programs can facilitate interagency student articulation.

Visit FloridaShines' Common Prerequisites Manual to identify courses that are prerequisites for admission into an upper division program. When sub-baccalaureate courses are aligned to the course admissions requirements of baccalaureate programs with the same career pathway, students can enter upper division coursework seamlessly.

Clock Hour Program

When offered at the district level, this program is a planned sequence of instruction consisting of 2 occupational completion points and the courses as shown below.

OCP	Course Number	Course Title	Length
A	HIM0009	Introduction to Health Information Technology	90 hours
B	HIM0091	Medical Coder/Biller I	350 hours
	HIM0092	Medical Coder/Biller II	350 hours
	HIM0093	Medical Coder/Biller III	320 hours

College Credit Program

When offered at the college credit level, this ATD program is part of the Health Information Technology AS (1351070700) and has a program length of 37 credits.

Florida's Career Readiness Skills for CTE Programs

Employability Skills	
01.0	Apply academic skills to workplace scenarios.
01.01	Use reading skills.
01.02	Use writing skills.
01.03	Use mathematical strategies and procedures.
01.04	Use scientific principles and procedures.
02.0	Design a solution to an industry problem.
02.01	Use critical thinking.
02.02	Use creativity.
02.03	Make sound decisions.
02.04	Solve problems.
02.05	Reason.
02.06	Plan and organize.
03.0	Manage resources within an industry project
03.01	Manage time.
03.02	Manage money or resources.
03.03	Manage materials.
03.04	Manage personnel.
04.0	Oversee the subcomponents, operations and output of a technical or organizational system.
04.01	Manage systems.
04.02	Monitor systems.
04.03	Improve systems.
05.0	Use information for decision making.
05.01	Locate information.
05.02	Organize information.
05.03	Use information.

	05.04 Analyze information.
	05.05 Communicate information.
06.0	Apply relevant technology to workplace scenarios to aid productivity.
	06.01 Use technology.
07.0	Interpret and express interpersonal communication.
	07.01 Communicate verbally.
	07.02 Listen actively.
	07.03 Comprehend written material.
	07.04 Convey information in writing.
	07.05 Communicate nonverbally.
	07.06 Interpret nonverbal communication.
08.0	Interact with others to accomplish workplace goals.
	08.01 Collaborate with others in a team.
	08.02 Respond to customer needs.
	08.03 Exercise leadership.
	08.04 Negotiate to resolve conflict.
	08.05 Respect others.
09.0	Manage personal behavior to maximize productivity and professional growth.
	09.01 Demonstrate responsibility and self-discipline.
	09.02 Adapt and show flexibility.
	09.03 Work independently.
	09.04 Demonstrate a willingness to learn.
	09.05 Demonstrate integrity.
	09.06 Demonstrate professionalism.
	09.07 Take initiative.
	09.08 Display positive attitude.
	09.09 Take responsibility for professional growth.

Job Attainment	
10.0	Find, assess and apply to job opportunities.
10.01	Identify online job posts relevant to his or her career aspirations.
10.02	Compare and contrast the job posts' required qualifications, job duties, compensation, benefits and employers.
10.03	Define what information, documentation and writing prompts are required for the positions.
11.0	Communicate personal competence, character and fit for a job opportunity.
11.01	Develop a resume.
11.02	Write a cover letter.
11.03	Curate a professional portfolio that includes work products.
11.04	Prepare for and experience a mock job interview.
12.0	Cultivate and leverage relationships to professionally advance.
12.01	Request a signed reference letter, letter of recommendation and/or an online skill/professionalism endorsement.
12.02	Develop a plan to cultivate a professional digital footprint.
12.03	Develop a networking plan for a specific industry of interest.

Standards

After successfully completing this program, the student will be able to perform the following:

01.0 Demonstrate an understanding of healthcare organizations and health occupations.
02.0 Demonstrate the ability to communicate and use interpersonal skills effectively.
03.0 Explore health informatics as a health professional.
04.0 Apply knowledge of health data concepts.
05.0 Manage the adoption of multiple formats of health records and the function of digital applications.
06.0 Apply Health Information Technology principles.
07.0 Apply classification systems, clinical vocabularies, and terminologies.
08.0 Evaluate ethical issues in Health Information professions.
09.0 Demonstrate compliance with laws, regulations, and standards that impact healthcare.
10.0 Apply policies, regulations, and standards to the management of information associated with treatment, payment, and operations (TPO).
11.0 Demonstrate computer knowledge and skills.
12.0 Demonstrate employability skills.
13.0 Describe the anatomy and physiology of the human body.
14.0 Demonstrate proficiency in the application of medical terminology.
15.0 Demonstrate an understanding of the fundamentals of disease processes in relation to the human body, including pharmacology.
16.0 Demonstrate proficiency in current medical code set systems and technology-assisted coding solutions.
17.0 Demonstrate proficiency in complex coding scenarios and value-based care requirements.
18.0 Articulate health information services within modern healthcare delivery systems related to the medical coder/biller.
19.0 Ensure professional and ethical behavior of a medical coder/biller in an evolving digital healthcare environment.
20.0 Participate in healthcare revenue cycle management processes.

Florida Department of Education
Student Performance Standards

Program Title: **Medical Coder/Biller - ATD**
Clock Hour Program Number: **H170530**

When this program is offered at the district level, the following organization of courses, standards and benchmarks apply.

Course Number: HIM0009 **Occupational Completion Point: A** **Introduction to Health Information Technology – 90 Hours**	
01.0	Demonstrate an understanding of healthcare organizations and health occupations. The student will be able to:
01.01	Discuss the evolution of healthcare.
01.02	Demonstrate an understanding of the infrastructure of healthcare in the United States.
01.03	Discuss healthcare regulatory agencies and organizations.
01.04	Recognize levels of education, credentialing requirements, employment opportunities, workplace environments, and career growth potential.
01.05	Summarize the roles of various providers and disciplines throughout the continuum of healthcare.
02.0	Demonstrate the ability to communicate and use interpersonal skills effectively. The student will be able to:
02.01	Apply basic speaking and active listening skills with meaningful feedback.
02.02	Identify characteristics of successful and unsuccessful communication including barriers.
02.03	Demonstrate emotional intelligence (e.g., recognize verbal and non-verbal cues).
02.04	Demonstrate effective professional communication using correct spelling, grammar, formatting, and confidentiality.
02.05	Use appropriate medical terminology and abbreviations.
02.06	Promote health information training and awareness to internal/external stakeholders.
02.07	Model communication skills to varied levels of understanding and cultural orientation, including generational differences, cultural, socioeconomic, ethnic, and religious groups.
02.08	Distinguish between subjective and objective information.
03.0	Explore health informatics as a health professional. The student will be able to:

	03.01 Discuss the past, present, and future of health information.
	03.02 Examine professional opportunities related to health information.
	03.03 Demonstrate knowledge of industry-recognized credentials and professional associations applicable to the field of health information.
04.0	Apply knowledge of health data concepts. The student will be able to:
	04.01 Examine various health data uses and data sets.
	04.02 Identify various characteristics of health data quality and emerging standards.
05.0	Manage the adoption of multiple formats of health records and the function of digital applications. The student will be able to:
	05.01 Apply regulations and requirements of health information to the continuum of care.
	05.02 Analyze health information as it relates to treatment, payment, and operations (TPO).
06.0	Apply Health Information Technology principles. The student will be able to:
	06.01 Explain how changing regulations and technology impact the health information field.
	06.02 Validate the accuracy, integrity, and reliability of information from health information systems and applications in healthcare.
	06.03 Demonstrate proficiency and understanding of creation, use, storage, retrieval, and exchange of health data.
07.0	Apply classification systems, clinical vocabularies, and terminologies. The student will be able to:
	07.01 Demonstrate the use of classification systems, clinical vocabularies, terminologies, and nomenclatures.
08.0	Evaluate ethical issues in Health Information professions. The student will be able to:
	08.01 Interpret the industry-recognized code of ethics for healthcare information practices.
	08.02 Analyze ethical issues related to health information.
	08.03 Manage ethical issues related to treatment, payment, and operations.
09.0	Demonstrate compliance with laws, regulations, and standards that impact healthcare. The student will be able to:
	09.01 Advocate the importance of maintaining ethical and legal standards in gathering, managing, and analyzing health information.
	09.02 Identify all regulations, laws, and standards that impact health information, including but not limited to the Health Insurance Portability and Accountability Act (HIPAA).

	09.03 Explain the composition of the legal health record.
	09.04 Apply health information policies and procedures for privacy, confidentiality, and security.
	09.05 Articulate legal terms and processes that impact healthcare.
10.0	Apply policies, regulations, and standards to the management of information associated with treatment, payment, and operations (TPO). The student will be able to:
	10.01 Describe how regulatory change impacts workflow.
	10.02 Demonstrate knowledge of policies and procedures for access and disclosure of protected health information to authorized users.
	10.03 Adhere to appropriate and applicable healthcare regulatory and accrediting agency guidelines.
11.0	Demonstrate computer knowledge and skills. The student will be able to:
	11.01 Demonstrate the ability to create, manage, organize, attach, and retrieve files.
	11.02 Demonstrate the ability to connect to and perform research using search engines and by identifying reputable websites.
	11.03 Demonstrate proficiency in word processing, spreadsheets, and presentation software.
	11.04 Demonstrate the ability to manage software programs.
	11.05 Demonstrate knowledge of safe computer practices and security procedures such as encryption, passwords, and biometrics.
12.0	Demonstrate employability skills. The student will be able to:
	12.01 Identify and exemplify professional traits desirable in a member of the healthcare team.
	12.02 Demonstrate professional standards of healthcare workers as they apply to hygiene, dress, language, and behavior (e.g., telephone and email etiquette, social media, courtesy, and self-introductions).
	12.03 Identify necessary documentation that may be required when applying for a healthcare position.
	12.04 Model the process to obtain employment, including, but not limited to, job search, cover letter, resume, application, interview, and thank you letter.
Course Number: HIM HIM0091 Occupational Completion Point: B Medical Coder/Biller I – 350 Hours	
13.0	Describe the anatomy and physiology of the human body. The student will be able to:
	13.01 Describe the structure and function of the respiratory system.
	13.02 Describe the structure and function of the circulatory system.

	13.03 Describe the structure and function of the musculoskeletal and connective tissue systems.
	13.04 Describe the structure and function of nervous and sensory systems.
	13.05 Describe the structure and function of the reproductive system.
	13.06 Describe the structure and function of the urinary system.
	13.07 Describe the structure and function of the digestive system.
	13.08 Describe the structure and function of the endocrine system.
	13.09 Describe the structure and function of the integumentary system.
	13.10 Describe major mental health disorders.
14.0	Demonstrate proficiency in the application of medical terminology. The student will be able to:
	14.01 Identify word parts of medical terminology in daily use.
	14.02 Build, spell, and pronounce correctly appropriate terms from word parts and be able to define the word.
	14.03 Identify word parts and be able to build, spell, and understand new words with those parts.
	14.04 Spell and use medical abbreviations.
	14.05 Identify terminology specific to healthcare settings, including surgical, medical, and therapeutic.
	14.06 Apply medical reference sources.
15.0	Demonstrate an understanding of the fundamentals of disease processes in relation to the human body, including pharmacology. The student will be able to:
	15.01 Demonstrate an understanding of the predisposing factors and direct causes of disease as they relate to the human body.
	15.02 Demonstrate an understanding of the general pathogenesis and morphology of disease and its role in the disease process.
	15.03 Demonstrate an understanding of pharmacological agents, uses, treatments, and utilize drug reference sources.
	15.04 Identify and use therapeutic and diagnostic test terminology.
Course Number: HIM HIM0092 Occupational Completion Point: B Medical Coder/Biller II – 350 Hours	
16.0	Demonstrate proficiency in current medical code set systems and technology-assisted coding solutions. The student will be able to:

	16.01	Apply coding conventions and guidelines when utilizing Computer-Assisted Coding (CAC) and Natural Language Processing (NLP) technologies.
	16.02	Implement processes for maintaining and updating coding resources, including automated updates and coding software maintenance.
	16.03	Validate codes using both manual and automated systems, including diagnosis, procedure, HCPCS level II codes, APCs, and applicable modifiers and groupings according to current official guidelines.
	16.04	Perform coding using current versions of ICD-10-CM, ICD-10-PCS, CPT, and HCPCS Level II in both traditional and virtual healthcare settings, including telehealth services.
	16.05	Analyze the impact of Social Determinants of Health (SDoH) coding on revenue cycle management and participate in Clinical Documentation Integrity (CDI) programs using modern technology solutions.
	16.06	Evaluate documentation compliance using automated auditing tools and Artificial Intelligence (AI)-assisted documentation improvement systems.
17.0	Demonstrate proficiency in complex coding scenarios and value-based care requirements. The student will be able to:	
	17.01	Apply coding concepts to complex cases, including post-acute care and virtual health encounters.
	17.02	Utilize advanced analytics tools to assess case-mix index, hierarchical condition categories (HCCs), risk adjustment factors, and quality metrics for value-based reimbursement.
	17.03	Analyze cases across the contemporary healthcare continuum, including remote patient monitoring and digital health services.
	17.04	Apply various classification systems, including ICD-O, DSM, ICF, and emerging code sets for precision medicine and genomics.
18.0	Articulate health information services within modern healthcare delivery systems related to the medical/coder biller. The student will be able to:	
	18.01	Collaborate with interdisciplinary teams in various departments through digital communication platforms and shared health information systems.
	18.02	Utilize electronic health records (EHRs) and other digital health information systems content in various settings.
	18.03	Educate stakeholders on regulatory compliance, including information blocking rules, interoperability requirements, and privacy regulations.
Course Number: HIM HIM0093 Occupational Completion Point: B Medical Coder/Biller III – 320 Hours		
19.0	Ensure professional and ethical behavior of a medical coder/biller in an evolving digital healthcare environment. The student will be able to:	
	19.01	Advocate for the expanding role of the medical coder/biller in data analytics and population health management.
	19.02	Adhere to ethical coding practices in AI and automated coding systems.
20.0	Participate in healthcare revenue cycle management processes. The student will be able to:	

20.01	Prepare claims using electronic claims submission systems and automated verification tools.
20.02	Analyze various payment methodologies (e.g., value-based and alternative payment models).
20.03	Utilize modern accounting software and patient financial engagement platforms.
20.04	Apply reimbursement methodologies for emerging healthcare delivery models, including telehealth and remote patient monitoring in various settings.
20.05	Maintain digital charge capture systems and management tools in various settings.
20.06	Implement compliance strategies for regulatory requirements (e.g., price transparency and surprise billing regulations).

Florida Department of Education
Student Performance Standards

Program Title: **Medical Coder/Biller-ATD**
ATD CIP Number: **0351071400**

When this program is offered at the college level, the following standards and benchmarks apply:

01.0	Demonstrate an understanding of healthcare organizations and health occupations. The student will be able to:
01.01	Discuss the evolution of healthcare.
01.02	Demonstrate an understanding of the infrastructure of healthcare in the United States.
01.03	Discuss healthcare regulatory agencies and organizations.
01.04	Recognize levels of education, credentialing requirements, employment opportunities, workplace environments, and career growth potential.
01.05	Summarize the roles of various providers and disciplines throughout the continuum of healthcare.
02.0	Demonstrate the ability to communicate and use interpersonal skills effectively. The student will be able to:
02.01	Apply basic speaking and active listening skills with meaningful feedback.
02.02	Identify characteristics of successful and unsuccessful communication including barriers.
02.03	Demonstrate emotional intelligence (e.g., verbal and non-verbal cues).
02.04	Demonstrate effective professional communication using correct spelling, grammar, formatting, and confidentiality.
02.05	Use appropriate medical terminology and abbreviations.
02.06	Promote health information training and awareness to internal/external stakeholders.
02.07	Model communication skills to varied levels of understanding and cultural orientation, including generational differences, cultural, socioeconomic, ethnic, and religious groups.
02.08	Distinguish between subjective and objective information.
03.0	Explore health informatics as a health professional. The student will be able to:
03.01	Discuss the past, present, and future of health information.
03.02	Examine the professional opportunities related to health information.

	03.03 Demonstrate knowledge of industry-recognized credentials and professional associations applicable to the field of health information.
04.0	Apply knowledge of health data concepts. The student will be able to:
	04.01 Examine various health data uses and data sets.
	04.02 Identify various characteristics of health data quality and emerging standards.
05.0	Manage the adoption of multiple formats of health records and the function of digital applications. The student will be able to:
	05.01 Apply regulations and requirements of health information to the continuum of care.
	05.02 Analyze health information as it relates to treatment, payment, and operations (TPO).
06.0	Apply Health Information Technology principles. The student will be able to:
	06.01 Explain how changing regulations and technology impact the health information field.
	06.02 Validate the accuracy, integrity, and reliability of information from health information systems and applications in healthcare.
	06.03 Demonstrate proficiency and understanding of creation, use, storage, retrieval, and exchange of health data.
07.0	Apply classification systems, clinical vocabularies, and terminologies. The student will be able to:
	07.01 Demonstrate the use of classification systems, clinical vocabularies, terminologies, and nomenclatures.
08.0	Evaluate ethical issues in Health Information professions. The student will be able to:
	08.01 Interpret the industry-recognized code of ethics for healthcare information practices.
	08.02 Analyze ethical issues related to health information.
	08.03 Manage ethical issues related to treatment, payment, and operations.
09.0	Demonstrate compliance with laws, regulations, and standards that impact healthcare. The student will be able to:
	09.01 Advocate the importance of maintaining ethical and legal standards in gathering, managing, and analyzing health information.
	09.02 Identify all regulations, laws, and standards that impact health information, including the Health Insurance Portability and Accountability Act (HIPAA.
	09.03 Explain the composition of the legal health record.
	09.04 Apply health information policies and procedures for privacy, confidentiality, and security.

	09.05 Articulate legal terms and processes that impact healthcare.
10.0	Apply policies, regulations, and standards to the management of information associated with treatment, payment, and operations (TPO). The student will be able to:
	10.01 Describe how regulatory change impacts workflow.
	10.02 Demonstrate knowledge of policies and procedures for access and disclosure of protected health information to authorized users.
	10.03 Adhere to appropriate and applicable healthcare regulatory and accrediting agency guidelines.
11.0	Demonstrate computer knowledge and skills. The student will be able to:
	11.01 Demonstrate the ability to create, manage, organize, attach, and retrieve files.
	11.02 Demonstrate the ability to connect to and perform research using search engines and by identifying reputable websites.
	11.03 Demonstrate proficiency in word processing, spreadsheets, and presentation software.
	11.04 Demonstrate the ability to manage software programs.
	11.05 Demonstrate knowledge of safe computer practices and security procedures such as encryption, passwords, and biometrics.
12.0	Demonstrate employability skills. The student will be able to:
	12.01 Identify and exemplify professional traits desirable in a member of the healthcare team.
	12.02 Demonstrate basic professional standards of healthcare workers as they apply to hygiene, dress, language, and behavior (e.g., telephone and email etiquette, social media, courtesy, and self-introductions).
	12.03 Identify necessary documentation that may be required when applying for a healthcare position.
	12.04 Model the process to obtain employment, including but not limited to, job search, cover letter, resume, application, interview, and thank you letter.
13.0	Describe the anatomy and physiology of the human body. The student will be able to:
	13.01 Describe the structure and function of the respiratory system.
	13.02 Describe the structure and function of the circulatory system.
	13.03 Describe the structure and function of the musculoskeletal and connective tissue systems.
	13.04 Describe the structure and function of nervous and sensory systems.
	13.05 Describe the structure and function of the reproductive system.

	13.06 Describe the structure and function of the urinary system.
	13.07 Describe the structure and function of the digestive system.
	13.08 Describe the structure and function of the endocrine system.
	13.09 Describe the structure and function of the integumentary system.
	13.10 Describe major mental health disorders.
14.0	Demonstrate proficiency in the application of medical terminology. The student will be able to:
	14.01 Identify word parts of medical terminology in daily use.
	14.02 Build, spell, and pronounce correctly, appropriate terms from word parts, and be able to define the word.
	14.03 Identify word parts and be able to build, spell, and understand new words with those parts.
	14.04 Spell and use medical abbreviations.
	14.05 Identify terminology specific to healthcare settings, including surgical, medical, and therapeutic.
	14.06 Apply medical reference sources.
15.0	Demonstrate an understanding of the fundamentals of disease processes in relation to the human body, including pharmacology. The student will be able to:
	15.01 Demonstrate an understanding of the predisposing factors and direct causes of disease as they relate to the human body.
	15.02 Demonstrate an understanding of the general pathogenesis and morphology of disease and its role in the disease process.
	15.03 Demonstrate an understanding of pharmacological agents, uses, treatments, and utilize drug reference sources.
	15.04 Identify and use therapeutic and diagnostic test terminology.
16.0	Demonstrate proficiency in current medical code set systems and technology-assisted coding solutions. The student will be able to:
	16.01 Adopt coding conventions and guidelines when utilizing Computer-Assisted Coding (CAC) and Natural Language Processing (NLP) technologies.
	16.02 Implement processes for maintaining and updating coding resources, including automated updates and coding software maintenance.
	16.03 Validate codes using both manual and automated systems, including diagnosis, procedure, HCPCS level II codes, APCs, and applicable modifiers and groupings according to current official guidelines.
	16.04 Perform coding using current versions of ICD-10-CM, ICD-10-PCS, CPT, and HCPCS Level II in both traditional and virtual healthcare settings, including telehealth services.

	16.05	Analyze the Social Determinants of Health (SDoH) coding on revenue cycle management and participate in Clinical Documentation Integrity (CDI) programs using modern technology solutions.
	16.06	Evaluate documentation compliance using automated auditing tools and Artificial Intelligence (AI)-assisted documentation improvement systems.
17.0		Demonstrate proficiency in complex coding scenarios and value-based care requirements. The student will be able to:
	17.01	Apply coding concepts to complex cases, including post-acute care and virtual health encounters.
	17.02	Utilize advanced analytics tools to assess case-mix index, hierarchical condition categories (HCCs), risk adjustment factors, and quality metrics for value-based disbursements.
	17.03	Analyze cases across the contemporary healthcare continuum, including remote patient monitoring and digital health services.
	17.04	Apply various classification systems, including ICD-O, DSM, ICF, and emerging code sets for precision medicine and genomics.
18.0		Articulate health information services within modern healthcare delivery systems related to the medical coder/biller. The student will be able to:
	18.01	Collaborate with interdisciplinary teams in various departments through digital communication platforms and shared health information systems
	18.02	Utilize the electronic health records (EHRs) and other digital health information systems content in various settings.
	18.03	Educate stakeholders on regulatory compliance, including information blocking rules, interoperability requirements, and privacy regulations.
19.0		Ensure professional and ethical behavior of a medical coder/biller in an evolving digital healthcare environment. The student will be able to:
	19.01	Advocate for the expanding role of the medical coder/biller in data analytics and population health management.
	19.02	Adhere to ethical coding practices in AI and automated coding systems.
20.0		Participate in healthcare revenue cycle management processes. The student will be able to:
	20.01	Prepare claims using electronic claims submission systems and automated verification tools.
	20.02	Analyze payment methodologies (e.g., value-based and alternative payment models).
	20.03	Utilize modern accounting software and patient financial engagement platforms.
	20.04	Apply reimbursement methodologies for emerging healthcare delivery models, including telehealth and remote patient monitoring in various settings.
	20.05	Maintain digital charge capture systems and management tools in various settings.
	20.06	Implement compliance strategies for regulatory requirements (e.g., price transparency and surprise billing regulations).

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as experimental, quality, and safety procedures are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate and troubleshoot equipment/tools used to make observations. Students understand measurement error; and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

Special Notes

Students should be encouraged to become members and participate in the activities of the professional organizations: American Health Information Management Association and/or American Academy of Procedural Coders.

About AHIMA Credentials: Completers of the Medical Biller Coder program may take the Certified Coding Associate (CCA) credential exam as the first step in their coding career. The CCA is an entry-level credential that distinguishes new coders in the job market. Individuals with a CCA credential:

- Exhibit a level of commitment, competency, and professional capability usually absent in a newcomer to the field.
- Demonstrate a commitment to the coding profession.
- Distinguish themselves from non-credentialed coders and those holding credentials from other organizations less demanding of the higher level of expertise required to earn AHIMA certification.

The CCA should be viewed as the starting point for an individual entering a career as a coder. The AHIMA Certified Coding Specialist (CCS) and Certified Coding Specialist-Physician-based (CCS-P) exams demonstrate mastery level skills in coding. Most individuals challenge the CCS or CCS-P exams after two or more years of work experience in coding.

American Health Information Management Association (AHIMA)
919 North Michigan Ave., Suite 2150, Chicago, IL. 60611-5519, (312) 233-1100

The American Academy of Professional Coders (AAPC) sponsors a certification exam for coders with expertise in physician-based settings which leads to the title of Certified Professional Coder (CPC) or Certified Professional Coder Hospital (CPC-H).

American Academy of Professional Coders (AAPC)
309 West 700 South, Salt Lake City, UT 84101, #800-626-2633

The National Healthcare Association also offers a national certification examination for a Certified Billing and Coding Specialist (CBCS).

National Healthcareer Association www.nhanow.com
7500 West 160th Street, Stilwell, KS 66085, #800-499-9092

Outcomes 01-12 are referred to as the Health Information Technology core and do not have to be completed if the students has previously completed the core in another program at any level. The Core should be taken first or concurrently with the first course in the program.

Career and Technical Student Organization (CTSO)

CTSOs are co-curricular career and technical student organizations providing leadership training and reinforcing specific career and technical skills. Career and Technical Student Organizations provide activities for students as an integral part of the instruction offered. Other CTSOs not listed in this curriculum framework or recognized by the Florida Department of Education are permissible provided they support student mastery over the standards and benchmarks of this curriculum framework.

Basic Skills

In Career Certificate programs offered for 450 hours or more, in accordance with Rule 6A-10.040, F.A.C., the minimum basic skills grade levels required for postsecondary adult career and technical students to complete this program are: Computation (Mathematics) and Communications (Reading and Language Arts). These grade level numbers correspond to a grade equivalent score obtained on a state designated basic skills examination.

Adult students with disabilities, as defined in Section 1004.02, Florida Statutes, may be exempted from meeting the Basic Skills requirements (Rule 6A-10.040). Students served in exceptional student education (except gifted) as defined in s. 1003.01, F.S., may also be exempted from meeting the Basic Skills requirement. Each school district and Florida College System Institution must adopt a policy addressing procedures for exempting eligible students with disabilities from the Basic Skills requirement as permitted in Section 1004.91, F.S.

Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

Note: postsecondary curriculum and regulated secondary programs cannot be modified.

Program Length

In accordance with Rule 6A-10.024, F.A.C., an ATD program consists of a course of study that is part of an AS or AAS degree program, is less than 60 credit hours, is approximately 50% of the technical component (non-general education), and leads to employment in a specific occupation. An ATD program may consist of either technical credit or college credit.

Students must have a high school diploma, a GED, or a certificate of completion to be admitted to an ATD program. Within six weeks of entry, students in ATD programs of 450 or more hours must be tested pursuant to Rule 6A-10.040, F.A.C. and if below minimum standards for completion from the program, must receive remedial instruction. The minimum standards must be at least the equivalent of a score of ten (10) on all sections of basic skills test approved in Rule 6A-10.040, F.A.C. Students must successfully complete all remedial instruction before completing the ATD.

Community Colleges may offer either college or career credit toward the ATD. A Career Center in a public school district may offer an ATD program only as technical credit, with college credit awarded to a student upon articulation to a community college (Section 1004.02, F.S.)

When offered at a community college the standard length of this program is 37 credits. When offered at a technical center the standard length of this program is 1110 clock hours.

In accordance with Rule 6A-10.024, F.A.C., all faculty providing instruction must have at least a baccalaureate degree or an associate degree with demonstrated competencies in the specific instructional program as defined by the Southern Association of Colleges and Schools.

Florida Department of Education
Curriculum Framework

The standards and benchmarks for this program were updated for the 2026-27 academic year.

Program Title: **Medical Information Coder/Biller**
Career Cluster: **Health Science**

College Credit Certificate	
CIP Number	0351071404
Program Type	College Credit Certificate (CCC)
Program Length	37 credit hours
CTSO	HOSA
SOC Codes (all applicable)	For program SOC codes, please see the Program and Course Tables section of the CTE Program Resources page linked below.
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml

Purpose

This certificate program is part of the Health Information Technology AS degree program (1351070700).

A College Credit Certificate consists of a program of instruction of less than sixty (60) credits of college-level courses, which is part of an AS or AAS degree program and prepares students for entry into employment (Rule 6A-14.030, F.A.C.).

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Health Science career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of Health Science career cluster.

The program is designed to prepare students for employment in a variety of health care settings as entry-level coders, medical record coders, coding technicians, coding clerks, or medical coders/billers (Medical Records and Health Information Technicians). Some colleges may choose to divide the Coder/Biller Certificate into two tracks, one for coding and one for billing.

The content includes but is not limited to medical terminology, anatomy and physiology, coding systems, fundamentals of disease process, including pharmacology, healthcare delivery systems, basics of medical records services, ethical and legal responsibilities, safety/security procedures, basic data processing, and employability skills.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Program Structure

When developing the course sequence for the local implementation of this program, select courses that:

- Meet the skill development requirements of the standards and benchmarks of this program.
- Where reasonable and practicable, align with programs offered by your institution or other postsecondary institutions in Florida, including:
    - Related AS and AAS degrees.
    - Baccalaureate degrees within the same career pathway and/or Federal CIP code.

Visit FloridaShines' Discover Programs website to identify other institutions that offer similar programs to review their course sequencing. Where appropriate, course alignment between institutions offering related programs can facilitate interagency student articulation.

Visit FloridaShines' Common Prerequisites Manual to identify courses that are prerequisites for admission into an upper division program. When sub-baccalaureate courses are aligned to the course admissions requirements of baccalaureate programs with the same career pathway, students can enter upper division coursework seamlessly.

Florida's Career Readiness Skills for CTE Programs

Employability Skills	
01.0	Apply academic skills to workplace scenarios.
01.01	Use reading skills.
01.02	Use writing skills.
01.03	Use mathematical strategies and procedures.
01.04	Use scientific principles and procedures.
02.0	Design a solution to an industry problem.
02.01	Use critical thinking.
02.02	Use creativity.
02.03	Make sound decisions.
02.04	Solve problems.
02.05	Reason.
02.06	Plan and organize.
03.0	Manage resources within an industry project
03.01	Manage time.
03.02	Manage money or resources.
03.03	Manage materials.
03.04	Manage personnel.
04.0	Oversee the subcomponents, operations and output of a technical or organizational system.
04.01	Manage systems.
04.02	Monitor systems.
04.03	Improve systems.
05.0	Use information for decision making.
05.01	Locate information.
05.02	Organize information.
05.03	Use information.

	05.04 Analyze information.
	05.05 Communicate information.
06.0	Apply relevant technology to workplace scenarios to aid productivity.
	06.01 Use technology.
07.0	Interpret and express interpersonal communication.
	07.01 Communicate verbally.
	07.02 Listen actively.
	07.03 Comprehend written material.
	07.04 Convey information in writing.
	07.05 Communicate nonverbally.
	07.06 Interpret nonverbal communication.
08.0	Interact with others to accomplish workplace goals.
	08.01 Collaborate with others in a team.
	08.02 Respond to customer needs.
	08.03 Exercise leadership.
	08.04 Negotiate to resolve conflict.
	08.05 Respect others.
09.0	Manage personal behavior to maximize productivity and professional growth.
	09.01 Demonstrate responsibility and self-discipline.
	09.02 Adapt and show flexibility.
	09.03 Work independently.
	09.04 Demonstrate a willingness to learn.
	09.05 Demonstrate integrity.
	09.06 Demonstrate professionalism.
	09.07 Take initiative.
	09.08 Display positive attitude.
	09.09 Take responsibility for professional growth.

Job Attainment	
10.0	Find, assess and apply to job opportunities.
10.01	Identify online job posts relevant to his or her career aspirations.
10.02	Compare and contrast the job posts' required qualifications, job duties, compensation, benefits and employers.
10.03	Define what information, documentation and writing prompts are required for the positions.
11.0	Communicate personal competence, character and fit for a job opportunity.
11.01	Develop a resume.
11.02	Write a cover letter.
11.03	Curate a professional portfolio that includes work products.
11.04	Prepare for and experience a mock job interview.
12.0	Cultivate and leverage relationships to professionally advance.
12.01	Request a signed reference letter, letter of recommendation and/or an online skill/professionalism endorsement.
12.02	Develop a plan to cultivate a professional digital footprint.
12.03	Develop a networking plan for a specific industry of interest.

Standards

After successfully completing this program, the student will be able to perform the following:

01.0 Demonstrate an understanding of healthcare organizations and health occupations.
02.0 Demonstrate the ability to communicate and use interpersonal skills effectively.
03.0 Explore health informatics as a health professional.
04.0 Apply knowledge of health data concepts.
05.0 Manage the adoption of multiple formats of health records and the function of digital applications.
06.0 Apply Health Information Technology principles.
07.0 Apply classification systems, clinical vocabularies, and terminologies.
08.0 Evaluate ethical issues in Health Information professions.
09.0 Demonstrate compliance with laws, regulations, and standards that impact healthcare.
10.0 Apply policies, regulations, and standards to the management of information associated with treatment, payment, and operations (TPO).
11.0 Demonstrate computer knowledge and skills.
12.0 Demonstrate employability skills.
13.0 Describe the anatomy and physiology of the human body.
14.0 Demonstrate proficiency in the application of medical terminology.
15.0 Demonstrate an understanding of the fundamentals of disease processes in relation to the human body, including pharmacology.
16.0 Demonstrate proficiency in current medical code set systems and technology-assisted coding solutions.
17.0 Demonstrate proficiency in complex coding scenarios and value-based care requirements.
18.0 Articulate health information services within modern healthcare delivery systems related to the medical coder/biller.
19.0 Ensure professional and ethical behavior of a medical coder/biller in an evolving digital healthcare environment.
20.0 Participate in healthcare revenue cycle management processes.

Florida Department of Education
Student Performance Standards

Program Title: **Medical Information Coder/Biller**
CIP Number: **0351071404**
Program Length: **37 credit hours**

This certificate program is part of the Health Information Technology AS degree program (1351070700). At the completion of this program, the student will be able to:	
01.0	Demonstrate an understanding of healthcare organizations and health occupations. The student will be able to:
01.01	Discuss the evolution of healthcare.
01.02	Demonstrate an understanding of the infrastructure of healthcare in the United States.
01.03	Discuss healthcare regulatory agencies and organizations.
01.04	Recognize levels of education, credentialing requirements, employment opportunities, workplace environments, and career growth potential.
01.05	Summarize the roles of various providers and disciplines throughout the continuum of healthcare and respond to their information needs.
02.0	Demonstrate the ability to communicate and use interpersonal skills effectively. The student will be able to:
02.01	Apply basic speaking and active listening skills with meaningful feedback.
02.02	Identify characteristics of successful and unsuccessful communication, including barriers.
02.03	Demonstrate emotional intelligence (e.g., recognize verbal and non-verbal cues).
02.04	Demonstrate effective professional communication using correct spelling, grammar, formatting, and confidentiality.
02.05	Use appropriate medical terminology and abbreviations.
02.06	Promote health information training and awareness to internal/external stakeholders.
02.07	Model communication skills to varied levels of understanding and cultural orientation, including generational differences, cultural, socioeconomic, ethnic, and religious groups.
02.08	Distinguish between subjective and objective information.
03.0	Explore health informatics as a health professional. The student will be able to:
03.01	Discuss the past, present, and future of health information.

	03.02 Examine professional opportunities related to health information.
	03.03 Demonstrate knowledge of industry-recognized credentials and professional associations applicable to the field of health information.
04.0	Apply knowledge of health data concepts. The student will be able to:
	04.01 Examine various health data uses and data sets.
	04.02 Identify various characteristics of health data quality and emerging standards.
05.0	Manage the adoption of multiple formats of health records and the function of digital applications. The student will be able to:
	05.01 Apply regulations and requirements of health information to the continuum of care.
	05.02 Analyze health information as it relates to treatment, payment, and operations (TPO).
06.0	Apply Health Information Technology principles. The student will be able to:
	06.01 Explain how changing regulations and technology impact the health information field.
	06.02 Validate the accuracy, integrity, and reliability of information from health information systems and applications in healthcare.
	06.03 Demonstrate proficiency and understanding of creation, use, storage, retrieval, and exchange of health data.
07.0	Apply classification systems, clinical vocabularies, and terminologies. The student will be able to:
	07.01 Demonstrate the use of classification systems, clinical vocabularies, terminologies, and nomenclatures.
08.0	Evaluate ethical issues in Health Information professions. The student will be able to:
	08.01 Interpret the industry-recognized code of ethics for healthcare information practices.
	08.02 Analyze ethical issues related to health information.
	08.03 Manage ethical issues related to treatment, payment, and operations.
09.0	Demonstrate compliance with laws, regulations, and standards that impact healthcare. The student will be able to:
	09.01 Advocate the importance of maintaining ethical and legal standards in gathering, managing, and analyzing health information.
	09.02 Identify all regulations, laws, and standards that impact health information, including the Health Insurance Portability and Accountability Act (HIPAA).
	09.03 Explain the composition of the legal health record.

	09.04 Apply health information policies and procedures for privacy, confidentiality, and security.
	09.05 Articulate legal terms and processes that impact healthcare.
10.0	Apply policies, regulations, and standards to the management of information associated with treatment, payment, and operations (TPO). The student will be able to:
	10.01 Describe how regulatory change impacts workflow.
	10.02 Demonstrate knowledge of policies and procedures for access and disclosure of protected health information to authorized users.
	10.03 Adhere to appropriate and applicable healthcare regulatory and accrediting agency guidelines.
11.0	Demonstrate computer knowledge and skills. The student will be able to:
	11.01 Demonstrate the ability to create, manage, organize, attach, and retrieve files.
	11.02 Demonstrate the ability to connect to and perform research using search engines and by identifying reputable websites.
	11.03 Demonstrate proficiency in word processing, spreadsheets, and presentation software.
	11.04 Demonstrate the ability to manage software programs.
	11.05 Demonstrate knowledge of safe computer practices and security procedures such as encryption, passwords, and biometrics.
12.0	Demonstrate employability skills. The student will be able to:
	12.01 Identify and exemplify professional traits desirable in a member of the healthcare team.
	12.02 Demonstrate professional standards of healthcare workers as they apply to hygiene, dress, language, and behavior (e.g., telephone and email etiquette, social media, courtesy, and self-introductions).
	12.03 Identify necessary documentation that may be required when applying for a healthcare position.
	12.04 Model the process to obtain employment, including but not limited to, job search, cover letter, resume, application, interview, and thank you letter.
13.0	Describe the anatomy and physiology of the human body. The student will be able to:
	13.01 Describe the structure and function of the respiratory system.
	13.02 Describe the structure and function of the circulatory system.
	13.03 Describe the structure and function of the musculoskeletal and connective tissue systems.
	13.04 Describe the structure and function of nervous and sensory systems.

	13.05 Describe the structure and function of the reproductive system.
	13.06 Describe the structure and function of the urinary system.
	13.07 Describe the structure and function of the digestive system.
	13.08 Describe the structure and function of the endocrine system.
	13.09 Describe the structure and function of the integumentary system.
	13.10 Describe major mental health disorders.
14.0	Demonstrate proficiency in the application of medical terminology. The student will be able to:
	14.01 Identify word parts of medical terminology in daily use.
	14.02 Build, spell, and pronounce correctly appropriate terms from word parts and be able to define the word.
	14.03 Identify word parts and be able to build, spell, and understand new words with those parts.
	14.04 Spell and use medical abbreviations.
	14.05 Identify terminology specific to healthcare settings, including surgical, medical, and therapeutic.
	14.06 Apply medical reference sources.
15.0	Demonstrate an understanding of the fundamentals of disease processes in relation to the human body, including pharmacology. The student will be able to:
	15.01 Demonstrate an understanding of the predisposing factors and direct causes of disease as they relate to the human body.
	15.02 Demonstrate an understanding of the general pathogenesis and morphology of disease and its role in the disease process.
	15.03 Demonstrate an understanding of pharmacological agents, uses, treatments, and utilize drug reference sources.
	15.04 Identify and use diagnostic test terminology.
16.0	Demonstrate proficiency in current medical code set systems and technology-assisted coding solutions. The student will be able to:
	16.01 Apply coding conventions and guidelines when utilizing Computer-Assisted Coding (CAC) and Natural Language Processing (NLP) technologies.
	16.02 Implement processes for maintaining and updating coding resources, including automated updates and coding software maintenance.
	16.03 Validate codes using both manual and automated systems, including diagnosis, procedure, HCPCS level II codes, APCs, and applicable modifiers and groupings according to current official guidelines.

	16.04	Perform coding using current versions of ICD-10-CM, ICD-10-PCS, CPT, and HCPCS Level II in both traditional and virtual healthcare settings, including telehealth services.
	16.05	Analyze the impact of Social Determinants of Health (SDoH) coding on revenue cycle management and participate in Clinical Documentation Integrity (CDI) programs using modern technology solutions.
	16.06	Evaluate documentation compliance using automated auditing tools and Artificial Intelligence (AI)-assisted documentation improvement systems.
17.0	Demonstrate proficiency in complex coding scenarios and value-based care requirements. The student will be able to:	
	17.01	Apply coding concepts to complex cases, including post-acute care and virtual health encounters.
	17.02	Utilize advanced analytics tools to assess case-mix index, hierarchical condition categories (HCCs), risk adjustment factors, and quality metrics for value-based reimbursement.
	17.03	Analyze cases across the contemporary healthcare continuum, including remote patient monitoring and digital health services.
	17.04	Apply various classification systems, including ICD-O, DSM, ICF, and emerging code sets for precision medicine and genomics.
18.0	Articulate health information services within modern healthcare delivery systems related to the medical coder/biller. The student will be able to:	
	18.01	Collaborate with interdisciplinary teams in various departments through digital communication platforms and shared health information systems.
	18.02	Utilize electronic health records (EHRs) and other digital health information systems content in various settings.
	18.03	Educate stakeholders on regulatory compliance, including information blocking rules, interoperability requirements, and privacy regulations.
19.0	Ensure professional and ethical behavior of a medical coder/biller in an evolving digital healthcare environment. The student will be able to:	
	19.01	Advocate for the expanding role of the medical coder/biller in data analytics and population health management.
	19.02	Adhere to ethical coding practices in AI and automated coding systems.
20.0	Participate in healthcare revenue cycle management processes. The student will be able to:	
	20.01	Prepare claims using electronic claims submission systems and automated verification tools.
	20.02	Analyze various payment methodologies (e.g., value-based and alternative payment models).
	20.03	Utilize modern accounting software and patient financial engagement platforms.
	20.04	Apply reimbursement methodologies for emerging healthcare delivery models, including telehealth and remote patient monitoring, in various settings.
	20.05	Maintain digital charge capture systems and management tools in various settings.

20.06 Implement compliance strategies for regulatory requirements (e.g., price transparency and surprise billing regulations).

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as experimental, quality, and safety procedures are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate and troubleshoot equipment/tools used to make observations. Students understand measurement error; and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

Special Notes

This program is part of Health Information Technology or Office Administration - Medical Office Specialization. The College Credit Certificate guarantees transfer of credit of 37 hours toward the AS degree in Health Information Technology or Office Administration. Minimum entrance requirements for this program include a high school diploma or GED.

The cooperative method of instruction or clinical rotation is appropriate for this program. Whenever these methods are offered, the following is required for each student: a training plan, signed by the student, teacher, and employer, which includes instructional objectives and a list of on-the-job and in-school learning experiences; and a work station which reflects equipment, skills, and tasks which are relevant to the occupation which the student has chosen as a career goal. The student may receive compensation for work performed.

Faculty teaching this program must have a minimum of an AS degree in Health Information Management.

Students should be encouraged to become members and participate in the activities of the professional organizations: American Health Information Management Association and/or American Academy of Procedural Coders.

About AHIMA Credentials: Students who complete the Medical Biller Coder program may take the Certified Coding Associate (CCA) credential exam as the first step in their coding career. The CCA is an entry-level credential that distinguishes new coders in the job market. Individuals with a CCA credential:

- Exhibit a level of commitment, competency, and professional capability usually absent in a newcomer to the field.
- Demonstrate a commitment to the coding profession.
- Distinguish themselves from non-credentialed coders and those holding credentials from other organizations less demanding of the higher level of expertise required to earn AHIMA certification.

The CCA should be viewed as the starting point for an individual entering a career as a coder. The AHIMA CCS and CCS-P exams demonstrate mastery level skills in coding. Most individuals challenge the CCS or CCS-P exams after two or more years of work experience in coding.

American Health Information Management Association (AHIMA)
919 North Michigan Ave., Suite 2150, Chicago, IL. 60611-5519 (312) 233-1100

The American Academy of Professional Coders (AAPC) sponsors a certification exam for coders with expertise in physician-based settings which leads to the title of Certified Professional Coder (CPC) or Certified Professional Coder Hospital (CPC-H).

American Academy of Professional Coders
309 West 700 South, Salt Lake City, UT 84101 #800-626-2633

The National Healthcare Association also offers a national certification examination for a Certified Billing and Coding Specialist (CBCS).

National Healthcareer Association www.nhanow.com
7500 West 160th Street, Stilwell, Kansas 66085 #800-499-9092

Outcomes 01-12 are referred to as the Health Information Technology core and do not have to be completed if the students has previously completed the core in another program at any level. The Core should be taken in the program.

Career and Technical Student Organization (CTSO)

CTSOs are co-curricular career and technical student organizations providing leadership training and reinforcing specific career and technical skills. Career and Technical Student Organizations provide activities for students as an integral part of the instruction offered. Other CTSOs not listed in this curriculum framework or recognized by the Florida Department of Education are permissible provided they support student mastery over the standards and benchmarks of this curriculum framework.

Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

Florida Department of Education
Curriculum Framework

The standards and benchmarks for this program were updated for the 2026-27 academic year.

Program Title: **Clinical Research Coordinator**
Career Cluster: **Health Science**

College Credit Certificate	
CIP Number	0351071901
Program Type	College Credit Certificate (CCC)
Program Length	30 credit hours
CTSO	HOSA
SOC Codes (all applicable)	For program SOC codes, please see the Program and Course Tables section of the CTE Program Resources page linked below.
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml

Purpose

This certificate program is part of the Clinical Research Professional AS degree program (1351071902).

A College Credit Certificate consists of a program of instruction of less than sixty (60) credits of college-level courses, which is part of an AS or AAS degree program and prepares students for entry into employment (Rule 6A-14.030, F.A.C.).

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Health Science career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of Health Science career cluster.

The purpose of this program is to prepare students for employment as clinical research coordinators (Natural Science Manager), (Medical and Health Services Manager), (Manager), or (Healthcare Support Workers) or to provide supplemental training for persons previously or currently employed in these occupations.

The content includes but is not limited to communication skills, leadership skills, human relations and employability skills, principles of management, introduction to computer literacy, health care organization, medical ethics, legal aspects, and advanced technical skills in a chosen health-related profession, health and safety, and CPR.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Program Structure

This program is a planned sequence of instruction consisting of 30 credit hours.

When developing the course sequence for the local implementation of this program, select courses that:

- Meet the skill development requirements of the standards and benchmarks of this program.
- Where reasonable and practicable, align with programs offered by your institution or other postsecondary institutions in Florida, including:
  - Related AS and AAS degrees.
  - Baccalaureate degrees within the same career pathway and/or Federal CIP code.

Visit FloridaShines' Discover Programs website to identify other institutions that offer similar programs to review their course sequencing. Where appropriate, course alignment between institutions offering related programs can facilitate interagency student articulation.

Visit FloridaShines' Common Prerequisites Manual to identify courses that are prerequisites for admission into an upper division program. When sub-baccalaureate courses are aligned to the course admissions requirements of baccalaureate programs with the same career pathway, students can enter upper division coursework seamlessly.

Florida's Career Readiness Skills for CTE Programs

Employability Skills	
01.0	Apply academic skills to workplace scenarios.
01.01	Use reading skills.
01.02	Use writing skills.
01.03	Use mathematical strategies and procedures.
01.04	Use scientific principles and procedures.
02.0	Design a solution to an industry problem.
02.01	Use critical thinking.
02.02	Use creativity.
02.03	Make sound decisions.
02.04	Solve problems.
02.05	Reason.
02.06	Plan and organize.
03.0	Manage resources within an industry project
03.01	Manage time.
03.02	Manage money or resources.
03.03	Manage materials.
03.04	Manage personnel.
04.0	Oversee the subcomponents, operations and output of a technical or organizational system.
04.01	Manage systems.
04.02	Monitor systems.
04.03	Improve systems.
05.0	Use information for decision making.
05.01	Locate information.
05.02	Organize information.
05.03	Use information.

	05.04 Analyze information.
	05.05 Communicate information.
06.0	Apply relevant technology to workplace scenarios to aid productivity.
	06.01 Use technology.
07.0	Interpret and express interpersonal communication.
	07.01 Communicate verbally.
	07.02 Listen actively.
	07.03 Comprehend written material.
	07.04 Convey information in writing.
	07.05 Communicate nonverbally.
	07.06 Interpret nonverbal communication.
08.0	Interact with others to accomplish workplace goals.
	08.01 Collaborate with others in a team.
	08.02 Respond to customer needs.
	08.03 Exercise leadership.
	08.04 Negotiate to resolve conflict.
	08.05 Respect others.
09.0	Manage personal behavior to maximize productivity and professional growth.
	09.01 Demonstrate responsibility and self-discipline.
	09.02 Adapt and show flexibility.
	09.03 Work independently.
	09.04 Demonstrate a willingness to learn.
	09.05 Demonstrate integrity.
	09.06 Demonstrate professionalism.
	09.07 Take initiative.
	09.08 Display positive attitude.
	09.09 Take responsibility for professional growth.

Job Attainment	
10.0	Find, assess and apply to job opportunities.
10.01	Identify online job posts relevant to his or her career aspirations.
10.02	Compare and contrast the job posts' required qualifications, job duties, compensation, benefits and employers.
10.03	Define what information, documentation and writing prompts are required for the positions.
11.0	Communicate personal competence, character and fit for a job opportunity.
11.01	Develop a resume.
11.02	Write a cover letter.
11.03	Curate a professional portfolio that includes work products.
11.04	Prepare for and experience a mock job interview.
12.0	Cultivate and leverage relationships to professionally advance.
12.01	Request a signed reference letter, letter of recommendation and/or an online skill/professionalism endorsement.
12.02	Develop a plan to cultivate a professional digital footprint.
12.03	Develop a networking plan for a specific industry of interest.

Standards

After successfully completing this program, the student will be able to perform the following:

01.0 Demonstrate basic knowledge of medical terminology, anatomy and physiology.
02.0 Identify and apply basic knowledge of different aspects of wellness.
03.0 Demonstrate knowledge of funding and site sponsorship related to clinical research including: public/private grants and contracts and lifecycles of clinical trials.
04.0 Demonstrate knowledge of the guidelines and regulations governing clinical trials.
05.0 Demonstrate ability to work as a clinical research professional.
06.0 Demonstrate knowledge of the compliance and monitoring practices in clinical research.
07.0 Demonstrate knowledge of the research process including: consent, screening, phases of clinical trials, product development and adverse events and safety.
08.0 Demonstrate knowledge of current events in the field of public health, biomedical science and clinical research.
09.0 Demonstrate the ability to identify U.S. health care delivery funding sources.
10.0 Demonstrate knowledge of the principles and language of pharmacology, including drugs and drug classes, diagnostic tests, indications, techniques.

Florida Department of Education
Student Performance Standards

Program Title: **Clinical Research Coordinator**
CIP Number: **0351071901**
Program Length: **30 credit hours**

This certificate program is part of the Clinical Research Professional AS degree program (1351071902). At the completion of this program, the student will be able to:	
01.0	Demonstrate basic knowledge of medical terminology, anatomy and physiology. The student will be able to:
01.01	Define, describe and discuss anatomic names and descriptive terms of the body.
01.02	Demonstrate an understanding of basic patient discharge and transfer procedures.
01.03	Describe common abbreviations and commonly used medical terms and their proper usage.
02.0	Identify and apply basic knowledge of different aspects of wellness. The student will be able to:
02.01	Discuss integrating health living into one's lifestyle.
02.02	Define: how physical fitness, mental health, nutrition, substance use, and abuse, and family influences connect with the concept of patient wellness.
02.03	Describe the impact of social media and time in the digital environment on physical and mental health and wellness.
02.04	Identify the risk factors for cardiovascular disease.
02.05	Describe the effects of tobacco, smoking and vaping.
02.06	Describe the various fitness methods to improve health.
02.07	Discuss the effects of nutrition on health and wellness.
02.08	Explain body composition and achieving a healthy weight.
02.09	Describe stress management strategies.
02.10	Discuss the use and abuse of illicit drugs in society.
02.11	Describe the effects of chronic disease on the human body.
03.0	Demonstrate knowledge of funding and site sponsorship related to clinical research including: public/private grants and contracts and lifecycles of clinical trials. The student will be able to:

	03.01 Describe key concepts and skills used in the site-sponsor relationship.
	03.02 Classify clinical research funding sources and the protocols used to secure funding.
	03.03 Discuss constructs related to grants and contracts management in clinical research.
	03.04 Demonstrate knowledge of lifecycles in clinical trials.
	03.05 Define the terms and language used in startup and closing Items on clinical research.
	03.06 Determine communication methods to be used in the startup and closing of items in clinical research.
04.0	Demonstrate knowledge of the guidelines and regulations governing clinical trials. The student will be able to:
	04.01 Understand guidelines and regulations clinical trials.
	04.02 Describe HIPPAA and clinical research privacy issues.
	04.03 Identify Good Clinical Practices/ International Conference on Harmonization guidelines related to human subjects research.
	04.04 Discuss sources and uses of essential documents generated from clinical studies.
	04.05 Explain the role of compliance in maintaining fidelity to a study protocol.
	04.06 Provide examples of a standard response to a request for documentation of meeting award conditions.
	04.07 Understand quantitative and qualitative analysis techniques used in interpreting research findings.
05.0	Demonstrate ability to work as a clinical research professional. The student will be able to:
	05.01 Identify clinical and behavioral research settings where Clinical Research Professionals are employed.
	05.02 Demonstrate an understanding of the essential duties of a Clinical Research Professional.
	05.03 Describe procedures and processes used to protect research participants.
	05.04 Discuss research activities of placement site.
	05.05 Demonstrate an understanding of how placement site works with: local, county, state and federal agencies to carry out their research activities.
	05.06 Evaluate the role of Clinical Research Professionals in research settings.
	05.07 Demonstrate the skills necessary to be a productive member of a research team including; working on a multidisciplinary research team and demonstrating an ability to work with confidential research participant information.

06.0	Demonstrate knowledge of the compliance and monitoring issues in clinical research. The student will be able to:
06.01	Describe the role of compliance in clinical research.
06.02	Identify issues related to compliance in human subject research.
06.03	Explain activities associated with monitoring clinical research trails.
06.04	Discuss processes used to resolve issues that may arise from monitoring as part of a clinical trial.
06.05	Provide examples of quality assurance audits used in clinical research and discuss their value in relation to performing research with human subjects.
06.06	Define the types of inspections clinical research facilities are subject to.
07.0	Demonstrate knowledge of the research process including: consent, screening, phases of clinical trials, product development and adverse events and safety. The student will be able to:
07.01	Describe processes involved in clinical research.
07.02	Define and describe issues associated with participant consent and assent.
07.03	Explain the goals, limitations and basic rules for screening participants.
07.04	Discuss aspects of product development (drugs & devices).
07.05	Discuss impacts of clinical trial stakeholders.
07.06	Accurately describe how epidemiology is used in clinical research.
07.07	Explain processes related to adverse events and safety.
08.0	Demonstrate knowledge of current events in the field of public health. The student will be able to:
08.01	Identify sources and platforms (e.g., news, media, and governmental) used to communicate public health events to the general public.
08.02	Describe the implications of current events on public health.
08.03	Discuss concerns related to how public health information is relayed to the public.
08.04	Recognize how reporting of global events (e.g., epidemics, regime change, and weather events) has the potential to impact other areas.
08.05	Locate emerging public health trends.
08.06	Explain etiology of emerging public health trends discussed throughout semester.

	08.07 Discuss legislation designed to protect the public's right to information during major health events (epidemics, terrorism, natural disasters).
09.0	Identify and apply knowledge of United States (U.S.) health care delivery and fiscal resources. The student will be able to:
	09.01 Describe the changes landscape of health services and its relevance on the existing healthcare system, facilities, and services.
	09.02 Explain the impacts of public policies on healthcare, such as availability of healthcare services, cost, delivery, and financial implications.
	09.03 Describe the various health care organizations and service delivery options.
	09.04 Identify health professions and explain the role of each and their licensing/educational requirements.
	09.05 Compare and contrast the health care delivery systems of the U.S. with other countries.
	09.06 Understand the array of career choices in the health care sector of the economy.
	09.07 Discuss the various sources and uses of funds for healthcare
10.0	Demonstrate knowledge of the principles and language of pharmacology, including drugs and drug classes, diagnostic tests, indications, techniques. The student will be able to:
	10.01 Describe pharmacological principles.
	10.02 Classify routes of administration.
	10.03 Describe the relationships between drug classes and disease processes within medical specialties.
	10.04 Recognize commonly prescribed medications.
	10.05 Use appropriate pharmacological and laboratory references.
	10.06 Describe indications, actions, dosages, and routes of administration.

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as, experimental, quality, and safety procedures are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate and troubleshoot equipment/tools used to make observations. Students understand measurement error; and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

Career and Technical Student Organization (CTSO)

CTSOs are co-curricular career and technical student organizations providing leadership training and reinforcing specific career and technical skills. Career and Technical Student Organizations provide activities for students as an integral part of the instruction offered. Other CTSOs not listed in this curriculum framework or recognized by the Florida Department of Education are permissible provided they support student mastery over the standards and benchmarks of this curriculum framework.

Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

Florida Department of Education
Curriculum Framework

Program Title: **Medical Assisting Specialist**
Career Cluster: **Health Science**

College Credit Certificate	
CIP Number	0351080104
Program Type	College Credit Certificate (CCC)
Program Length	44 credit hours
CTSO	HOSA
SOC Codes (all applicable)	For program SOC codes, please see the Program and Course Tables section of the CTE Program Resources page linked below.
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml

Purpose

This certificate program is part of the Medical Assisting Advanced AS degree program (1351080103).

A College Credit Certificate consists of a program of instruction of less than sixty (60) credits of college-level courses, which is part of an AS or AAS degree program and prepares students for entry into employment (Rule 6A-14.030, F.A.C.).

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Health Science career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of the Health Science career cluster.

The content includes but is not limited to communication, transcultural communication in healthcare, interpersonal skills, legal and ethical responsibilities, health-illness concepts, administrative and clinical duties, emergency procedures including CPR and first aid, emergency preparedness, safety and security procedures, medical terminology, anatomy and physiology, and employability skills.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Program Structure

When developing the course sequence for the local implementation of this program, select courses that:

- Meet the skill development requirements of the standards and benchmarks of this program.
- Where reasonable and practicable, align with programs offered by your institution or other postsecondary institutions in Florida, including:
    - Related AS and AAS degrees.
    - Baccalaureate degrees within the same career pathway and/or Federal CIP code.

Visit FloridaShines' Discover Programs website to identify other institutions that offer similar programs to review their course sequencing. Where appropriate, course alignment between institutions offering related programs can facilitate interagency student articulation.

Visit FloridaShines' Common Prerequisites Manual to identify courses that are prerequisites for admission into an upper division program. When sub-baccalaureate courses are aligned to the course admissions requirements of baccalaureate programs with the same career pathway, students can enter upper division coursework seamlessly.

Florida's Career Readiness Skills for CTE Programs

Employability Skills	
01.0	Apply academic skills to workplace scenarios.
01.01	Use reading skills.
01.02	Use writing skills.
01.03	Use mathematical strategies and procedures.
01.04	Use scientific principles and procedures.
02.0	Design a solution to an industry problem.
02.01	Use critical thinking.
02.02	Use creativity.
02.03	Make sound decisions.
02.04	Solve problems.
02.05	Reason.
02.06	Plan and organize.
03.0	Manage resources within an industry project
03.01	Manage time.
03.02	Manage money or resources.
03.03	Manage materials.
03.04	Manage personnel.
04.0	Oversee the subcomponents, operations and output of a technical or organizational system.
04.01	Manage systems.
04.02	Monitor systems.
04.03	Improve systems.
05.0	Use information for decision making.
05.01	Locate information.
05.02	Organize information.
05.03	Use information.

	05.04 Analyze information.
	05.05 Communicate information.
06.0	Apply relevant technology to workplace scenarios to aid productivity.
	06.01 Use technology.
07.0	Interpret and express interpersonal communication.
	07.01 Communicate verbally.
	07.02 Listen actively.
	07.03 Comprehend written material.
	07.04 Convey information in writing.
	07.05 Communicate nonverbally.
	07.06 Interpret nonverbal communication.
08.0	Interact with others to accomplish workplace goals.
	08.01 Collaborate with others in a team.
	08.02 Respond to customer needs.
	08.03 Exercise leadership.
	08.04 Negotiate to resolve conflict.
	08.05 Respect others.
09.0	Manage personal behavior to maximize productivity and professional growth.
	09.01 Demonstrate responsibility and self-discipline.
	09.02 Adapt and show flexibility.
	09.03 Work independently.
	09.04 Demonstrate a willingness to learn.
	09.05 Demonstrate integrity.
	09.06 Demonstrate professionalism.
	09.07 Take initiative.
	09.08 Display positive attitude.
	09.09 Take responsibility for professional growth.

Job Attainment	
10.0	Find, assess and apply to job opportunities.
10.01	Identify online job posts relevant to his or her career aspirations.
10.02	Compare and contrast the job posts' required qualifications, job duties, compensation, benefits and employers.
10.03	Define what information, documentation and writing prompts are required for the positions.
11.0	Communicate personal competence, character and fit for a job opportunity.
11.01	Develop a resume.
11.02	Write a cover letter.
11.03	Curate a professional portfolio that includes work products.
11.04	Prepare for and experience a mock job interview.
12.0	Cultivate and leverage relationships to professionally advance.
12.01	Request a signed reference letter, letter of recommendation and/or an online skill/professionalism endorsement.
12.02	Develop a plan to cultivate a professional digital footprint.
12.03	Develop a networking plan for a specific industry of interest.

Standards

After successfully completing this program, the student will be able to perform the following:

01.0 Demonstrate knowledge of the healthcare delivery system and health occupations.
02.0 Demonstrate the ability to communicate and use interpersonal skills effectively.
03.0 Demonstrate legal and ethical responsibilities.
04.0 Demonstrate an understanding of and apply wellness and disease concepts.
05.0 Recognize and practice safety and security procedures.
06.0 Recognize and respond to emergency situations.
07.0 Recognize and practice infection control procedures.
08.0 Demonstrate an understanding of information technology applications in healthcare.
09.0 Demonstrate employability skills.
10.0 Demonstrate knowledge of bloodborne diseases, including HIV/AIDS.
11.0 Apply basic math and science skills.
12.0 Demonstrate proper use of medical terminology.
13.0 Demonstrate knowledge of legal and ethical responsibilities for medical assistants.
14.0 Demonstrate an understanding of anatomy and physiology concepts.
15.0 Demonstrate effective front office duties.
16.0 Demonstrate accepted professional, communication, and interpersonal skills as related to phlebotomy.
17.0 Discuss phlebotomy in relation to the healthcare setting.
18.0 Identify the anatomic structure and function of body systems in relation to services performed by the phlebotomist.
19.0 Recognize and identify collection reagents supplies, equipment, and interfering chemical substances.
20.0 Demonstrate skills and knowledge necessary to perform phlebotomy.
21.0 Practice infection control following standard precautions.
22.0 Practice accepted procedures of transporting, accessioning, and processing specimens.
23.0 Practice quality assurance and safety.
24.0 Describe the role of a medical assistant with intravenous therapy.
25.0 Describe the cardiovascular system.
26.0 Identify legal and ethical responsibilities of an electrocardiogram (EKG/ECG) aide.
27.0 Perform correct patient care techniques for EKG/ECG testing.
28.0 Demonstrate knowledge of, apply, and use medical instrumentation modalities when performing EKG/ECG.
29.0 Demonstrate clinical care assistance.
30.0 Demonstrate knowledge of infection control fundamentals.
31.0 Demonstrate knowledge of minor medical treatments.
32.0 Demonstrate knowledge of diagnostic medical procedures.
33.0 Demonstrate basic radiologic procedures.
34.0 Demonstrate knowledge of pharmacological principles and medication administration.
35.0 Demonstrate knowledge of CLIA-waived diagnostic clinical laboratory procedures.
36.0 Demonstrate knowledge of emergency preparedness and protective practices.

37.0 Perform administrative and managerial duties.
38.0 Perform clinical and general skills.
39.0 Display professional work habits essential to medical assisting.
40.0 Demonstrate knowledge regarding the use of Artificial Intelligence (AI) in healthcare.

Florida Department of Education
Student Performance Standards

Program Title: **Medical Assisting**
CIP Number: **0351080104**
Program Length: **44 credit hours**

Standards 1-11 are referred to as the **Health Science Core** and are required standards in this program. Secondary and Postsecondary students completing the health science core will not have to repeat the core in any other health science program in which it is a part. When the recommended sequence is followed, the structure allows students to complete at specified points for employment or remain for advanced training or cross-training.

To ensure consistency whenever these courses are offered, the health science core standards (1-11) and benchmarks have been placed in a separate document. To access this document, visit this link:
https://www.fldoe.org/core/fileparse.php/20569/urlt/health-sci-core-psav-cc-2324.rtf

This certificate program is part of the Medical Assisting Advanced AS degree program (1351080103). At the completion of this program, the student will be able to:	
12.0	Demonstrate proper use of medical terminology. The student will be able to:
12.01	Use medical terminology as appropriate for a medical assistant.
12.02	Identify medical terms, labeling the word parts.
12.03	Define medical terms and abbreviations related to all body systems.
13.0	Demonstrate knowledge of legal and ethical responsibilities for medical assistants. The student will be able to:
13.01	Describe the role of the medical assistant.
13.02	Provide health care as set forth in section 458.3485, Florida Statutes, for the medical assistant.
13.03	Distinguish between the liability of physicians and medical personnel in the medical office.
13.04	Explain the principles for preventing medical liability.
13.05	List the principles in the Codes of Ethics for Medical Assistants as stated by the American Association of Medical Assistants.
14.0	Demonstrate an understanding of anatomy and physiology concepts. The student will be able to:
14.01	Define the terms anatomy and physiology.

14.02	Define both medical terms and abbreviations related to all body systems.
14.03	Define the principal directional terms, planes, quadrants, and cavities used in describing the body and the association of body parts to one another.
14.04	Define the levels of organization of the body from cells to systems.
14.05	Describe the function of the 11 major organ systems of the body (1) integumentary, (2) skeletal, (3) muscular, (4) nervous, (5) endocrine, (6) cardiovascular, (7) lymphatic, (8) respiratory, (9) digestive, (10) urinary, and (11) reproductive.
14.06	Describe symptoms and common disease pathology related to each body system and the relationship of the disease process to other body systems.
14.07	Discuss diagnostic options to identify common disease pathology and treatment options.
14.08	Compare the structure and function of the body across the life span.
15.0	Demonstrate effective front office duties. The student will be able to:
15.01	Utilize effective communication skills essential in the medical office and recognize both verbal and non-verbal cues.
15.02	Operate office equipment.
15.03	Perform clerical office procedures.
15.04	Discuss principles of using electronic medical record (EMR).
15.05	Prepare and maintain medical records both manually and within the EMR.
15.06	Screen and process mail.
15.07	Schedule routine appointments and patient admissions, and/or procedures, both manually and within the EMR.
15.08	Adhere to current government regulations, risk management, and compliance within the scope of practice of a medical assistant practicing in the state of Florida.
15.09	Maintain office inventory.
15.10	Inform patients of office policies.
15.11	Perform general medical office maintenance.
15.12	Perform daily office activities both manually and within the EMR.
15.13	Greet patients and visitors.
15.14	Maintain confidentiality and adhere to Health Insurance Portability and Accountability Act (HIPAA) regulations.

	15.15 Demonstrate safety and quality assurance in the workplace.
	15.16 Identify and maintain office security policies and procedures.
16.0	Demonstrate accepted professional, communication, and interpersonal skills as related to phlebotomy. The student will be able to:
	16.01 Demonstrate the appropriate professional behavior of a phlebotomist and describe the scope of practice (job skills and duties).
	16.02 Explain to the patient the procedure to be used in specimen collection.
	16.03 Explain in detail the importance of identifying patients correctly when drawing blood.
	16.04 Explain the importance of continuing education in relation to certification to maintain competency and skills.
17.0	Discuss phlebotomy in relation to the healthcare setting. The student will be able to:
	17.01 List, classify, and discuss various departments and services within the health care setting in which the phlebotomist must interact with to obtain laboratory specimens from patients.
	17.02 Identify the major departments/sections within the clinical laboratory, the major types of procedures run in each department/section, and their specimen requirements.
	17.03 Describe roles of the major classifications of clinical laboratory personnel (i.e., pathologist, chief/administrative technologist, CLS, MLS, MLT, MT, phlebotomist, lab assistant, etc.).
18.0	Identify the anatomic structure and function of body systems in relation to services performed by the phlebotomist. The student will be able to:
	18.01 Describe and define major body systems with emphasis on the circulatory system.
	18.02 List and describe the main superficial veins used in performing venipuncture.
	18.03 Locate the most appropriate site(s) for capillary and venipuncture.
	18.04 Describe the function of the following blood components: erythrocytes, thrombocytes, leukocytes, and plasma.
	18.05 Compare and contrast serum and plasma as they relate to blood collection.
	18.06 Discuss hemostasis, hemolysis, and methods of prevention as they relate to blood collection.
19.0	Recognize and identify collection reagents supplies, equipment, and interfering chemical substances. The student will be able to:
	19.01 Identify and discuss the proper use of appropriate types of equipment needed to collect various clinical laboratory blood specimens by venipuncture.
	19.02 Explain the special precautions and types of equipment needed to collect blood from the pediatric patient.
	19.03 Identify and discuss the proper use of supplies used in collecting short-draw specimens or difficult draws.

19.04	Identify and discuss the proper use of the various types of anticoagulants, preservatives, and gels used in blood collection and the vacuum tube color-codes for these additives.
19.05	Describe the types of specimens that are analyzed in the clinical laboratory and the phlebotomist's role in collecting and/or transporting these specimens to the laboratory.
19.06	Describe substances potentially encountered during phlebotomy that can interfere with the analysis of blood constituents.
19.07	Define and utilize correct medical terminology and metric measurement needed for specimen collection.
20.0	Demonstrate skills and knowledge necessary to perform phlebotomy. The student will be able to:
20.01	Follow approved procedure for completing a laboratory requisition form and recognize a properly completed form.
20.02	Demonstrate knowledge of established protocol for patient and specimen identification.
20.03	Discuss appropriate methods for facilitating and preparing the patient for capillary and venipuncture collection.
20.04	List appropriate antiseptic agents useful in preparing sites for capillary and venipuncture for adult and pediatric patients..
20.05	Perform venipuncture by evacuated tube, butterfly, and syringe systems, demonstrating appropriate use of supplies, proper handling of equipment and specimens, and appropriate patient care.
20.06	Describe the correct order of draw.
20.07	Describe the use of barcoding systems used for specimen collection.
20.08	Convey an understanding of capillary puncture using appropriate supplies and techniques for adult and pediatric patients.
20.09	Describe the most common complications associated with capillary and venipuncture, their causes, prevention, and treatment.
20.10	Recognize and respond to possible adverse patient reactions such as allergies, convulsions, syncope, lightheadedness, vomiting, and nerve involvement.
20.11	Perform appropriate procedures for disposing of used or contaminated capillary and venipuncture supplies.
20.12	Perform appropriate techniques for making a peripheral blood smear for hematologic evaluation.
20.13	Demonstrate the proper procedure for collecting blood cultures.
20.14	Demonstrate a working understanding of how the age and weight of patients impact the maximum amount of blood that can be safely drawn.
21.0	Practice infection control following standard precautions. The student will be able to:
21.01	Define the term “hospital-acquired infection.”
21.02	Describe and practice procedures for infection prevention, including hand washing skills.

	21.03 Discuss transmission-based precautions.
	21.04 Identify potential routes of infection and their complications.
22.0	Practice accepted procedures of transporting, accessioning, and processing specimens. The student will be able to:
	22.01 Instruct patients in the proper collection of urine (clean catch, mid-stream), sputum, and stool specimens.
	22.02 Follow the approved procedure for preparation and processing (e.g., centrifugation, separation, aliquoting, labeling, and storage) of serum, plasma, urine, sputum, stool, and wound culture specimens
	22.03 Describe the significance of time constraints for specimen collection, transporting, and delivery
	22.04 Describe routine procedures for transporting and processing specimens, including DOT packaging requirements.
23.0	Practice quality assurance and safety. The student will be able to:
	23.01 Distinguish and perform procedures that ensure the reliability of test results when collecting blood specimens.
	23.02 Practice appropriate patient safety.
	23.03 Practice safety in accordance with OSHA (State & Federal guidelines) for chemical, biological, and PPE established procedures, including proper disposal of sharps and biohazardous materials.
	23.04 Follow documentation procedures for work-related accidents.
	23.05 Implement appropriate Joint Commission patient safety goals and other accrediting/regulatory agency guidelines
24.0	Describe the role of a medical assistant with intravenous therapy. The student will be able to:
	24.01 Outline the principles of intravenous therapy.
	24.02 Understand intravenous terminology, practices, and equipment.
	24.03 Describe the dangers of intravenous treatment.
	24.04 Recognize the role of a medical assistant in assisting with intravenous therapy.
25.0	Describe the cardiovascular system. The student will be able to:
	25.01 Label the heart and surrounding structures.
	25.02 List the functions of the heart and surrounding structures.
	25.03 Trace the flow of blood through the body.

	25.04 Identify and describe the electrical conduction system.
26.0	Identify legal and ethical responsibilities of an electrocardiogram (EKG/ECG) aide. The student will be able to:
	26.01 Recognize and practice legal and ethical responsibilities as they relate to an EKG/ECG aide.
	26.02 Maintain a safe and efficient work environment.
	26.03 Maintain EKG/ECG equipment so it will be safe and accurate.
27.0	Perform correct patient care techniques for EKG/ECG testing. The student will be able to:
	27.01 Describe the physical preparation of the patient for EKG/ECG testing.
	27.02 Identify the patient and verify the requisition order.
	27.03 Prepare patient for EKG/ECG testing.
	27.04 State precautions required when performing an EKG/ECG.
28.0	Demonstrate knowledge of, apply, and use medical instrumentation modalities when performing EKG/ECG. The student will be able to:
	28.01 Calibrate and maintain EKG/ECG equipment in the work environment.
	28.02 Identify three types of lead systems (limb, augmented, and precordial/chest).
	28.03 State Einthoven's triangle.
	28.04 Demonstrate proper lead placement to include patients with special needs.
	28.05 Demonstrate knowledge of the Holter Monitor and provide patient education.
	28.06 Identify, troubleshoot, and resolve artifacts and mechanical problems.
	28.07 Perform 12 lead EKG/ECG.
	28.08 Recognize normal sinus rhythm.
	28.09 Recognize and report dysrhythmias.
	28.10 Recognize cardiac emergencies as seen on EKG/ECG.
	28.11 Use proper documentation skills to analyze electrocardiographs.
29.0	Demonstrate clinical care assistance. The student will be able to:

	29.01 Prepare patients for and assist the provider with physical examinations in all specialty areas.
	29.02 Measure and record vital signs, recognizing abnormalities and danger signs.
	29.03 Measure and record apical and radial pulses.
	29.04 Measure and record blood pressure.
	29.05 Record patient data.
	29.06 Educate patient on breast and testicular self-examinations.
	29.07 Assist with pediatric procedures.
	29.08 Educate patients regarding healthcare and wellness practices in accordance with their health status.
	29.09 Educate patients utilizing the U.S. Department of Agriculture's “My Plate” Food Guide (https://www.myplate.gov/).
	29.10 Prepare patients for diagnostic procedures.
30.0	Demonstrate knowledge of infection control fundamentals. The student will be able to:
	30.01 Practice standard precautions when performing sanitation, disinfection, and sterilization.
	30.02 Identify common instruments.
	30.03 Perform proper sterilization.
	30.04 Perform proper sanitization.
	30.05 Wrap instruments and supplies for autoclave.
	30.06 Demonstrate proper use of the autoclave.
	30.07 Perform proper disinfection.
	30.08 Demonstrate proper infection control.
	30.09 Demonstrate safety when handling contaminated objects.
	30.10 Create and maintain sterile fields.
	30.11 Demonstrate proper surgical hand washing and gloving.
	30.12 Remove sutures and staples.

	30.13 Dispose contaminated objects in correct receptacles.
31.0	Demonstrate knowledge of minor medical treatments. The student will be able to:
	31.01 Perform minor treatments as directed by the provider.
	31.02 Assist the provider with examination, treatment, and/or minor surgery.
	31.03 Organize examination and treatment areas before, during, and after patient care.
	31.04 Assist with orthopedic procedures.
	31.05 Demonstrate the knowledge of casting procedures and supplies.
	31.06 Apply correctly all types of roller bandages.
	31.07 Perform eye irrigations and instillations.
	31.08 Perform ear irrigations and instillations.
32.0	Demonstrate knowledge of diagnostic medical procedures. The student will be able to:
	32.01 Perform visual and auditory screening.
	32.02 Perform spirometry.
	32.03 Perform oximetry.
	32.04 Assist providers in the performance of Papanicolaou (Pap smear) and gynecologic exams.
33.0	Demonstrate basic radiologic procedures. The student will be able to:
	33.01 Describe the operation of radiologic equipment and the use of accessories.
	33.02 Describe how to preserve X-ray film files.
	33.03 Describe types of radiography systems.
	33.04 Educate patients for the preparation of non-contrast radiological exams.
	33.05 Demonstrate knowledge of other diagnostic imaging procedures.
34.0	Demonstrate knowledge of pharmacological principles and medication administration. The student will be able to:
	34.01 Identify commonly administered drugs, their uses, and effects.

	34.02 Identify major drug categories, drug names, and their actions.
	34.03 Use correct pharmaceutical abbreviations in accordance with the Joint Commission.
	34.04 Identify parenteral and non-parenteral drug administration.
	34.05 Educate patients regarding self-administration of medications.
	34.06 Execute dosage calculations accurately.
	34.07 Demonstrate knowledge of legal and ethical standards related to drug dispensing and administration under provider supervision.
	34.08 Demonstrate knowledge of drugs used in emergencies and first aid.
	34.09 Identify the general rules for drug administration.
	34.10 Recognize and report medication errors.
	34.11 Demonstrate appropriate techniques to prepare and administer parenteral (excluding IV) and non-parenteral medications.
35.0	Demonstrate knowledge of CLIA-waived diagnostic clinical laboratory procedures. The students will be able to:
	35.01 Comply with safety signs, symbols, and labels.
	35.02 Recognize signs and symptoms that may indicate to the physician a need for laboratory testing.
	35.03 Describe the criteria used by the Food and Drug Administration (FDA) to classify a test as “CLIA-waived” and the regulatory constraints on test performance.
	35.04 Explain the methods of quality control for CLIA-waived testing, identify acceptable and unacceptable control results, and describe specific corrective action required when results are unacceptable.
	35.05 Demonstrate proper technique for the collection of urine, capillary whole blood (finger/heel stick), culture material (throat/nasal swab and wound cultures), and other specimen types required for CLIA-waived tests.
	35.06 Instruct patients in the proper collection of urine (clean catch, mid-stream), sputum, and stool specimens.
	35.07 Perform CLIA-waived occult blood tests.
	35.08 Perform CLIA-waived urinalysis testing, including color and turbidity assessment and reagent test strips.
	35.09 Perform CLIA-waived hematology tests (e.g., hemoglobin, hematocrit).
	35.10 Perform CLIA-waived chemistry tests (e.g., glucose, cholesterol).
	35.11 Perform CLIA-waived pregnancy tests.

	35.12 Perform CLIA-waived infectious disease testing (e.g., strep screen, mono test, influenza A/B, and COVID).
36.0	Demonstrate knowledge of emergency preparedness and protective practices. The student will be able to:
	36.01 Maintain and operate emergency equipment and supplies.
	36.02 Participate in a mock environmental exposure event and document steps taken.
	36.03 Explain an evacuation plan for a medical office.
	36.04 Maintain a current list of community resources for emergency preparedness.
37.0	Perform administrative and managerial duties. The student will be able to:
	37.01 Execute data management using Electronic Medical Record (EMR), including, but not limited to, patient registration, appointment scheduling, charting, billing and insurance processing, procedure and diagnostic coding, ordering and monitoring patient testing, medication and prescription orders, keyboarding and correspondence, and performing an office inventory.
	37.02 Execute non-EMR data management, including, but not limited to, selecting appropriate procedure and diagnostic codes, processing insurance data and claims, and developing and maintaining billing and collection systems.
	37.03 Perform various financial procedures, including, but not limited to, billing and collection procedures, payroll procedures, and checkbook procedures.
	37.04 Demonstrate knowledge of management in a medical office, including but not limited to personnel records, interviewing, various management styles, risk management, and conflict resolution.
38.0	Perform clinical and general skills. The student will be able to:
	38.01 Demonstrate aseptic hand washing technique.
	38.02 Dispose of bio-hazardous waste in appropriate containers.
	38.03 Adhere to sterilization techniques according to standards.
	38.04 Prepare patients for examinations and/or minor office procedures and collect their vital signs and medical histories.
	38.05 Prepare and maintain examination and treatment area(s).
	38.06 Assist with examinations and/or minor office procedures.
	38.07 Provide and document patient education.
	38.08 Accurately record and report laboratory tests.
39.0	Display professional work habits essential to medical assisting. The student will be able to:
	39.01 Communicate appropriately in healthcare settings by listening, writing, speaking, and presenting with a professional demeanor.

	39.02 Collaborate, communicate, and interact professionally with other healthcare professionals.
	39.03 Contribute actively and appropriately as a team member.
	39.04 Exercise proper judgment and critical thinking skills in decision making.
	39.05 Adapt to changes in work environments with flexibility.
	39.06 Model professional work habits.
	39.07 Complete tasks using effective time management skills.
	39.08 Respond appropriately and quickly to patients' needs and concerns.
	39.09 Practice etiquette and social sensitivity in face-to-face interaction, on the telephone, and on the Internet.
	39.10 Identify resources related to patients' healthcare needs.
40.0	Demonstrate knowledge regarding the use of Artificial Intelligence (AI) in healthcare. The student will be able to:
	40.01 Explain the fundamentals of AI and its use in medical assisting.
	40.02 Identify healthcare sectors benefiting from AI.
	40.03 Demonstrate the use of AI tools used in medical assisting.
	40.04 Identify AI's role in patient privacy, data protection, and ethical concerns.
	40.05 Demonstrate knowledge of interpreting AI outputs in patient management systems.

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as, experimental, quality, and safety procedures are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate and troubleshoot equipment/tools used to make observations. Students understand measurement error; and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

Special Notes

Although it is not required, it is strongly recommended that the programs meet the Standards and Guidelines of an Accredited Educational Program for the Medical Assistant adopted by the American Association of Medical Assistants and the Commission on Accreditation of Allied Health Education Programs (CAAHEP) or the American Medical Technologist and the Accrediting Bureau of Health Education Schools (ABHES). For further information contact:

Commission on Accreditation of Allied Health Education Programs (CAAHEP) www.caahep.org/
1361 Park Street, Clearwater, FL 33756
Phone: 727-210-2350 Fax: 727-210-2354

Accrediting Bureau of Health Education Schools (ABHES) www.abhes.org/
777 Leesburg Pike, Suite 312, North Falls, VA 22043
(703) 917-9503

This program will also be in accordance with Florida Statute, Medical Assistants, 458.3485, F.S.

This program meets the Department of Health's education requirements for HIV/AIDS, Domestic Violence and Prevention of Medical Errors. Although not a requirement for initial licensure, it is a requirement for renewal, therefore the instructor **may** provide a certificate for renewal purposes to the student verifying these requirements have been met.

If students in this program are seeking a licensure, certificate or registration through the Department of Health, please refer to 456.0635, F.S. for more information on disqualification for a license, certificate, or registration through the Department of Health.

Program completers of a CAAHEP or ABHES-accredited program are eligible to take the American Association of Medical Assistants' Certification Examination (CMA) or the American Medical Technologists' Certification Examination (RMA). For further information contact:

American Association of Medical Assistants (AAMA) www.aama-ntl.org/
20 North Wacker Drive, Suite 1575, Chicago, Illinois 60606 (312-899-1500)
Or

American Medical Technologist (AMT) https://americanmedtech.org/
10700 West Higgins Road, Suite 150, Rosemont, Illinois 60018 (800-275-1268)

The Core should be taken first in the program. Following the successful completion of the core, the student is eligible to take the National Health Care Foundation Skill Standards Assessment with instructor approval and the completion of a portfolio.

Career and Technical Student Organization (CTSO)

CTSOs are co-curricular career and technical student organizations providing leadership training and reinforcing specific career and technical skills. Career and Technical Student Organizations provide activities for students as an integral part of the instruction offered. Other CTSOs not listed in this curriculum framework or recognized by the Florida Department of Education are permissible provided they support student mastery over the standards and benchmarks of this curriculum framework.

Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

Florida Department of Education
Curriculum Framework

The standards and benchmarks for this program were updated for the 2026-27 academic year.

Program Title: **Pharmacy Technician**
Program Type: **ATD (Applied Technology Diploma)**
Career Cluster: **Health Science**

	College Credit	Clock Hour
Program Number	N/A	H170700
CIP Number	0351080503	0351080507
Grade Level	Applied Technology Diploma (ATD)	30, 31
Program Length	40 credit hours	1050 clock hours
CTSO	HOSA, SkillsUSA	HOSA, SkillsUSA
SOC Codes (all applicable)	For program SOC codes, please see the Program and Course Tables section of the CTE Program Resources page linked below.	
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml	
Basic Skills Level:	N/A	Computation (Mathematics): 11 Communications (Reading and Language Arts): 10

Purpose

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Health Science career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of Health Science career cluster.

The program is designed to prepare students for employment as pharmacy technicians.

This program focuses on broad, transferable skills and stresses understanding and demonstration of the following elements of the health care industry: planning, management, finance, technical and production skills, underlying principles of technology, labor issues, community issues, health, safety, and environmental issues.

The content includes but is not limited to metric system, medical terminology, medicinal drugs, pharmaceutical compounding, USP 795 standards, sterile techniques, USP 797 and USP 800 standards, maintenance of inventory, IV preparation, receiving and handling of hazardous materials, preparing purchase orders, receiving and checking supplies purchased, printing labels, typing prescription labels, delivering medications, pricing prescription drug orders and supplies, prepackaging unit dose packages, patient record systems, control records, data processing automation in pharmacy, computer application, employability skills, leadership and human relations skills, health and safety, including CPR.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Program Structure

This program is an Applied Technology Diploma (ATD) program that is part of a technical degree program, is less than 60 credit hours, and leads to employment in a specific occupation. An ATD program may consist of either technical credit or college credit. A public school district may offer an ATD program only as clock hour credit, with college credit awarded to a student upon articulation to a state college.

When developing the course sequence for the local implementation of this program, select courses that:

- Meet the skill development requirements of the standards and benchmarks of this program.
- Where reasonable and practicable, align with programs offered by your institution or other postsecondary institutions in Florida, including:
  - Related AS and AAS degrees.
  - Baccalaureate degrees within the same career pathway and/or Federal CIP code.

Visit FloridaShines' Discover Programs website to identify other institutions that offer similar programs to review their course sequencing. Where appropriate, course alignment between institutions offering related programs can facilitate interagency student articulation.

Visit FloridaShines' Common Prerequisites Manual to identify courses that are prerequisites for admission into an upper division program. When sub-baccalaureate courses are aligned to the course admissions requirements of baccalaureate programs with the same career pathway, students can enter upper division coursework seamlessly.

Regulated Programs

This program is regulated by the Florida Board of Pharmacy. This program must be approved by the Board of Pharmacy. Program completers who wish to work as Pharmacy Technicians in the State of Florida must register with the Board of Pharmacy (465.014, F.S.).

Clock Hour Program

When offered at the district level, this program is a planned sequence of instruction consisting of 2 occupational completion points and the courses as shown below.

OCP	Course Number	Course Title	Length
A	HSC0003	Basic Healthcare Worker	90 hours

OCP	Course Number	Course Title	Length
B	PTN0084	Pharmacy Technician 1	360 hours
	PTN0085	Pharmacy Technician 2	300 hours
	PTN0086	Pharmacy Technician 3	300 hours

College Credit Program

When offered at the college credit level, this ATD program is part of the Pharmacy Management AS program (1351080502) and has a program length of 40 credits.

Florida's Career Readiness Skills for CTE Programs

Employability Skills	
01.0	Apply academic skills to workplace scenarios.
01.01	Use reading skills.
01.02	Use writing skills.
01.03	Use mathematical strategies and procedures.
01.04	Use scientific principles and procedures.
02.0	Design a solution to an industry problem.
02.01	Use critical thinking.
02.02	Use creativity.
02.03	Make sound decisions.
02.04	Solve problems.
02.05	Reason.
02.06	Plan and organize.
03.0	Manage resources within an industry project
03.01	Manage time.
03.02	Manage money or resources.
03.03	Manage materials.
03.04	Manage personnel.
04.0	Oversee the subcomponents, operations and output of a technical or organizational system.
04.01	Manage systems.
04.02	Monitor systems.
04.03	Improve systems.
05.0	Use information for decision making.
05.01	Locate information.
05.02	Organize information.
05.03	Use information.

	05.04 Analyze information.
	05.05 Communicate information.
06.0	Apply relevant technology to workplace scenarios to aid productivity.
	06.01 Use technology.
07.0	Interpret and express interpersonal communication.
	07.01 Communicate verbally.
	07.02 Listen actively.
	07.03 Comprehend written material.
	07.04 Convey information in writing.
	07.05 Communicate nonverbally.
	07.06 Interpret nonverbal communication.
08.0	Interact with others to accomplish workplace goals.
	08.01 Collaborate with others in a team.
	08.02 Respond to customer needs.
	08.03 Exercise leadership.
	08.04 Negotiate to resolve conflict.
	08.05 Respect others.
09.0	Manage personal behavior to maximize productivity and professional growth.
	09.01 Demonstrate responsibility and self-discipline.
	09.02 Adapt and show flexibility.
	09.03 Work independently.
	09.04 Demonstrate a willingness to learn.
	09.05 Demonstrate integrity.
	09.06 Demonstrate professionalism.
	09.07 Take initiative.
	09.08 Display positive attitude.
	09.09 Take responsibility for professional growth.

Job Attainment	
10.0	Find, assess and apply to job opportunities.
10.01	Identify online job posts relevant to his or her career aspirations.
10.02	Compare and contrast the job posts' required qualifications, job duties, compensation, benefits and employers.
10.03	Define what information, documentation and writing prompts are required for the positions.
11.0	Communicate personal competence, character and fit for a job opportunity.
11.01	Develop a resume.
11.02	Write a cover letter.
11.03	Curate a professional portfolio that includes work products.
11.04	Prepare for and experience a mock job interview.
12.0	Cultivate and leverage relationships to professionally advance.
12.01	Request a signed reference letter, letter of recommendation and/or an online skill/professionalism endorsement.
12.02	Develop a plan to cultivate a professional digital footprint.
12.03	Develop a networking plan for a specific industry of interest.

Standards

After successfully completing this program, the student will be able to perform the following:

01.0 Demonstrate knowledge of the healthcare delivery system and health occupations.
02.0 Demonstrate the ability to communicate and use interpersonal skills effectively.
03.0 Demonstrate legal and ethical responsibilities.
04.0 Demonstrate an understanding of and apply wellness and disease concepts.
05.0 Recognize and practice safety and security procedures.
06.0 Recognize and respond to emergency situations.
07.0 Recognize and practice infection control procedures.
08.0 Demonstrate an understanding of information technology applications in healthcare.
09.0 Demonstrate employability skills.
10.0 Demonstrate knowledge of blood-borne diseases, including HIV/AIDS.
11.0 Apply basic math and science skills.
12.0 Practice professional pharmacy relational skills.
13.0 Identify medical and legal considerations in various pharmacy settings.
14.0 Perform clerical duties as related to Pharmacy Practice.
15.0 Demonstrate knowledge of medication safety and prevention of medication errors.
16.0 Demonstrate knowledge of inventory management.
17.0 Initiate measurement and calculating techniques as they relate to United States Pharmacopeia (USP) 795 (non-sterile) compounding in pharmacy practice.
18.0 Demonstrate basic knowledge and skills in areas of anatomy/ physiology, pharmacology, and drug classification relevant to pharmacy technicians.
19.0 Prepare and deliver medications.
20.0 Repackage unit-dose medications.
21.0 Prepare United States Pharmacopeia (USP) 797 and USP 800 sterile products.

Florida Department of Education
Student Performance Standards

Program Title: **Pharmacy Technician - ATD**
Clock Hour Program Number: **H170700**

When this program is offered at the district level, the following organization of courses, standards, and benchmarks apply.

The **Basic Health Care Worker (HSC0003)** is referred to as the **Health Science Core** and is the first OCP in the majority of the Clock Hour health science programs. Secondary and Postsecondary students completing the health science core will not have to repeat the core in any other health science program in which it is a part. When the recommended sequence is followed, the structure allows students to complete at specified points for employment or remain for advanced training or cross-training.

Course Number: HSC0003
Occupational Completion Point: A
Basic Healthcare Worker – 90 Hours

To ensure consistency whenever these courses are offered, the health science core standards (1-11) and benchmarks have been placed in a separate document. To access this document, visit this link:
https://www.fldoe.org/core/fileparse.php/20569/urlt/health-sci-core-psav-cc-2324.rtf

Course Number: PTN0084
Occupational Completion Point: B
Pharmacy Technician 1 – 360 Hours

12.0	Practice professional pharmacy relational skills. The student will be able to:
12.01	Explore the meaning, organizational flow, and duties of pharmacy personnel.
12.02	Identify pharmacy organizations and their role in the profession, to include student membership opportunities.
12.03	Identify the current trends and perspectives in the pharmacy practice.
12.04	Describe how team building can facilitate change within the pharmacy working environment.
12.05	Understand the importance of good interpersonal skills/soft skills in various pharmacy settings.
12.06	Explain ethical conduct in job-related activities.
12.07	Identify State of Florida requirements for obtaining and maintaining pharmacy technician registration as well as continuing education requirements for renewal.
12.08	Explore the importance of national certification and the continuing education requirements for renewal.

13.0	Identify medical and legal considerations in various pharmacy settings. The student will be able to:
13.01	Articulate the significance of current national and Florida law, medical legal concepts, and administrative rules as they relate to the scope of practice for the pharmacy technician.
13.02	Demonstrate an understanding of current vaccines and their guidelines.
13.03	Convey an understanding of patient counseling requirements pertaining to OBRA-90 versus Medication Therapy Management (MTM).
13.04	Explain the legal requirements for accurate pharmacy documentation and recordkeeping.
13.05	Demonstrate an understanding of HIPAA in pharmacy practice pertaining to the ethical and legal considerations.
13.06	Convey an understanding of pertinent laws governing pharmacy practice, including but not limited to prescriptions, drug diversion, and use of E-FORCSE PDMP requirements.
13.07	Differentiate between controlled substance schedules (CI-CV) and their applicable regulations.
13.08	Convey an understanding of the Florida Right to Know Act with respect to P-listed drugs in addition to hazardous materials, the utilization of safety data sheets, and hazardous communication symbols.
13.09	Understand and explain activities that may be performed by pharmacy technicians and those that must be performed by licensed pharmacists, including final check.
13.10	Explain the importance of technology and its current use in various pharmacy settings.
13.11	Utilize emerging technologies such as AI to cross-reference reports with dispense/administration history to address unaccounted medications.
14.0	Perform clerical duties as related to Pharmacy Practice. The student will be able to:
14.01	Identify the major symbols and abbreviations used on prescriptions and state the meaning.
14.02	Utilize pharmacy reference manuals or websites.
14.03	Demonstrate retail pharmacy dispensing processes.
14.04	Utilize pharmacy software in processing pharmacy prescription data.
14.05	Identify and discuss applications of E-Prescribing and facsimile.
14.06	Utilize and apply interactive communication skills while gathering accurate information from patients and from other healthcare professionals.
14.07	Create, complete, and maintain patient profiles including third-party billing information.
14.08	Understand the processes of PBMs and third-party billing, resolving rejections, and obtaining prior authorizations.
14.09	Demonstrate professional communication skills within the scope of practice for the pharmacy technician.

	14.10 Demonstrate knowledge of systems used in maintaining pharmacy records.
15.0	Demonstrate knowledge of medication safety and prevention of medication errors. The student will be able to:
	15.01 Identify communication modalities that can result in the transmission of inaccurate information, and explain specific ways to make improvements.
	15.02 Convey an understanding of the patient's Bill of Rights for medication administration as it relates to pharmacy practice.
	15.03 Identify and explain appropriate patient safety goals by applicable accrediting and regulatory organizations.
	15.04 Identify potential errors that may result in quality-related events (QRE) and explain specific ways they can be prevented.
	15.05 Describe safety strategies used to prevent medication errors due to pharmaceutical abbreviations and terminology
	15.06 Summarize, evaluate, and describe the technician's role in quality assurance activities as related to various pharmacy practices.
16.0	Demonstrate knowledge of inventory management. The student will be able to:
	16.01 Convey an understanding of industry standards in purchasing pharmaceutical supplies.
	16.02 Demonstrate how to maintain a controlled substance inventory.
	16.03 Understand knowledge of pharmacy business math in prescription pricing systems.
	16.04 Maintain stock inventory, communicate shortages, and seek solutions to maintain continuity of patient care.
	16.05 Understand the process of how to create electronic purchase orders.
	16.06 Accurately perform the process of purchasing, receiving, special handling, storing, distributing, and disposing of pharmaceutical supplies.
	16.07 Convey an understanding of recall management and know the differences between types of recalls and how to address them.
	16.08 Convey an understanding of the inventory control process implemented by Title II of the Drug Quality and Security Act.
17.0	Initiate measurement and calculating techniques as they relate to United States Pharmacopeia (USP) 795 (non-sterile) compounding in pharmacy practice. The student will be able to:
	17.01 Convey an understanding of United States Pharmacopeia (USP) 795 standards.
	17.02 Convert measurements within the apothecary, avoirdupois, household, and metric systems.
	17.03 Perform common pharmaceutical calculations.
	17.04 Identify and utilize common pharmaceutical weighing equipment.

17.05	Identify and utilize common pharmaceutical volume measurement equipment.
17.06	Accurately demonstrate the technique of preparing common non-sterile pharmaceutical compounds.
17.07	Summarize, evaluate, and describe the technician's role in quality assurance activities as related to the preparation of non-sterile products.

Course Number: PTN0085 Occupational Completion Point: B Pharmacy Technician 2 – 300 Hours	
18.0	Demonstrate a basic knowledge and skills in areas of anatomy/ physiology, pharmacology, and drug classification relevant to pharmacy technicians. The student will be able to:
18.01	Evaluate and apply anatomical terminology to describe the location of parts or areas of the body and related disease processes.
18.02	Define the major classifications of pharmaceuticals and conditions treated.
18.03	Demonstrate knowledge of trade and generic name equivalents.
18.04	Evaluate the pharmacy technician’s understanding of pharmacology, including drug classifications, mechanisms of action, common side effects, and interactions.
18.05	Identify at least one official compendium of standards for quality and purity of drug monographs.
18.06	Convey an understanding of Investigational Drugs, Risk Evaluation and Mitigation Strategies (REMS), off-label indications, and emerging drug therapy.
18.07	Demonstrate an understanding of common adult doses of medications, duration of common drug therapies, and respective contraindications, including the BEERS Criteria.
18.08	Identify potential interactions that require a pharmacist’s intervention pertaining to food/alcohol, herbal, OTC, and/or prescription medications.
18.09	Identify allergy histories during the medication reconciliation process and discern “allergy” vs. “side effect” in optimizing care.
19.0	Prepare and deliver medications. The student will be able to:
19.01	Read and prepare medication orders correctly.
19.02	Demonstrate institutional pharmacy dispensing processes.
19.03	Compare all new orders with medications listed on profiles while noting any changes.
19.04	Utilize special precautions in the preparation of medications for pediatric patients.
19.05	Explain how to safely transport medications, being aware of hazards, theft, legal implications of accidental loss, and other consequences.

19.06	Understand how to correctly fill and deliver medication.
19.07	Collect data from the medication administration record.
19.08	Describe the use of automated medication dispensing equipment.

Course Number: PTN0086 Occupational Completion Point: B Pharmacy Technician 3 – 300-Hours	
20.0	Repackage unit dose medications. The student will be able to:
20.01	Locate the correct stock container.
20.02	Describe the use of unit-dose packaging equipment.
20.03	Measure, count, and place the individual dose in appropriate containers.
20.04	Understand precautions used when packaging unit-dose hazardous drugs.
20.05	Record repackaged medication data correctly.
20.06	Summarize, evaluate, and describe the technician's role in quality assurance activities as related to repackaging unit-dose medication.
21.0	Prepare United States Pharmacopeia (USP) 797 and USP 800 sterile products. The student will be able to:
21.01	Convey an understanding of United States Pharmacopeia (USP) 797 regulations.
21.02	Convey an understanding of United States Pharmacopeia (USP) 800 regulations.
21.03	Compare the medication order with the label on the vial and check the expiration date of the product.
21.04	Calculate drug dosage for parenteral use.
21.05	Reconstitute parenteral medications.
21.06	Demonstrate aseptic technique to withdraw medication from stock vial, measure correct quantity as instructed, select and insert it into IV solution without error.
21.07	Demonstrate aseptic technique to withdraw medication from an ampule using filter needle/straw.
21.08	Prepare parenteral solutions using proper aseptic technique.
21.09	Understand the preparation of Total Parenteral Nutrition (TPN) solutions.

21.10	Understand the preparation of chemotherapeutic agents using proper safety techniques.
21.11	Understand the appropriate technique while using specialized equipment such as: laminar flow hoods, filters, pumps, automated compounders, and barrier isolators.
21.12	Place label on IV solution container and record appropriately.
21.13	Perform a quality control check of the completed product.
21.14	Convey an understanding of the proper storage and disposal requirements of reconstituted and non-reconstituted IV solutions.
21.15	Convey an understanding of the proper storage and disposal of hazardous drugs.
21.16	Summarize, evaluate, and describe the technician's role in quality assurance activities related to the preparation of sterile products.
21.17	Understand the concept of Diversion Surveillance to assist in recognizing controlled substances.

Florida Department of Education
Student Performance Standards

Program Title: **Pharmacy Technician - ATD**
ATD CIP Number: **0351080503**

When this program is offered at the college level, the following standards and benchmarks apply:

Standards 1-11 are referred to as the **Health Science Core** and are required standards in this program. Secondary and Postsecondary students completing the health science core will not have to repeat the core in any other health science program in which it is a part. When the recommended sequence is followed, the structure allows students to complete at specified points for employment or remain for advanced training or cross-training.

To ensure consistency whenever these courses are offered, the health science core standards (1-11) and benchmarks have been placed in a separate document. To access this document, visit this link:
https://www.fldoe.org/core/fileparse.php/20569/urlt/health-sci-core-psav-cc-2324.rtf

Pharmacy Technician	
12.0	Practice professional pharmacy relational skills. The student will be able to:
12.01	Explore the meaning, organizational flow, and duties of pharmacy personnel.
12.02	Identify pharmacy organizations and their role in the profession, to include student membership opportunities.
12.03	Identify the current trends and perspectives in the pharmacy practice.
12.04	Describe how team building can facilitate change within the pharmacy working environment.
12.05	Understand the importance of good interpersonal skills/soft skills in various pharmacy settings.
12.06	Explain ethical conduct in job-related activities.
12.07	Identify State of Florida requirements for obtaining and maintaining pharmacy technician registration, as well as continuing education requirements for renewal.
12.08	Explore the importance of national certification and the continuing education requirements for renewal.
13.0	Identify medical and legal considerations in various pharmacy settings. The student will be able to:
13.01	Articulate the significance of current national and Florida law, medical legal concepts, and administrative rules as they relate to the scope of practice for the pharmacy technician.
13.02	Demonstrate an understanding of current vaccines and their guidelines.

	13.03 Convey an understanding of patient counseling requirements pertaining to OBRA-90 versus Medication Therapy Management (MTM).
	13.04 Explain the legal requirements for accurate pharmacy documentation and recordkeeping.
	13.05 Demonstrate an understanding of HIPAA in pharmacy practice pertaining to the ethical and legal considerations.
	13.06 Convey an understanding of pertinent laws governing pharmacy practice, including but not limited to prescriptions, drug diversion, and use of E-FORCSE PDMP requirements.
	13.07 Differentiate between controlled substance schedules (CI-CV) and their applicable regulations.
	13.08 Convey an understanding of the Florida Right to Know Act with respect to P-listed drugs in addition to hazardous materials, the utilization of safety data sheets, and hazardous communication symbols.
	13.09 Understand and explain activities that may be performed by pharmacy technicians and those that must be performed by licensed pharmacists, including final check.
	13.10 Explain the importance of technology and its current use in various pharmacy settings.
	13.11 Utilize emerging technologies such as AI to cross-reference reports with dispense/administration history to address unaccounted medications.
14.0	Perform clerical duties as related to Pharmacy Practice. The student will be able to:
	14.01 Utilize pharmaceutical medical terminology.
	14.02 Identify the major symbols and abbreviations used on prescriptions and state the meaning.
	14.03 Utilize pharmacy reference manuals or websites.
	14.04 Demonstrate retail pharmacy dispensing processes.
	14.05 Utilize pharmacy software in processing pharmacy prescription data.
	14.06 Identify and discuss applications of E-Prescribing and facsimile.
	14.07 Utilize and apply interactive communication skills while gathering accurate information from patients and from other healthcare professionals.
	14.08 Create, complete, and maintain patient profiles including third-party billing information.
	14.09 Understand the processes of PBMs and third-party billing, resolving rejections, and obtaining prior authorizations.
	14.10 Demonstrate professional communication skills within the scope of practice for the pharmacy technician.
	14.11 Demonstrate knowledge of systems used in maintaining pharmacy records.
15.0	15.0 Demonstrate knowledge of medication safety and prevention of medication errors. The student will be able to:

15.01	Identify communication modalities that can result in the transmission of inaccurate information and explain specific ways to make improvements.
15.02	Convey an understanding of the patient's Bill of Rights for medication administration as it relates to pharmacy practice.
15.03	Identify and explain appropriate patient safety goals by applicable accrediting and regulatory organizations.
15.04	Identify potential errors that may result in Quality Related Events and explain specific ways they can be prevented.
15.05	Describe safety strategies used to prevent medication errors due to pharmaceutical abbreviations and terminology
15.06	Summarize, evaluate, and describe the technician's role in quality assurance activities as related to various pharmacy practices.
16.0	Demonstrate knowledge of inventory management. The student will be able to:
16.01	Convey an understanding of industry standards in purchasing pharmaceutical supplies.
16.02	Demonstrate how to maintain a controlled substance inventory.
16.03	Understand knowledge of pharmacy business math in prescription pricing systems.
16.04	Maintain stock inventory, communicate shortages, and seek solutions to maintain continuity of patient care.
16.05	Understand the process of how to create electronic purchase orders.
16.06	Accurately perform the process of purchasing, receiving, special handling, storing, distributing, and disposing of pharmaceutical supplies.
16.07	Convey an understanding of recall management and know the differences between types of recalls and how to address them.
16.08	Convey an understanding of the inventory control process implemented by Title II of the Drug Quality and Security Act.
17.0	Initiate measurement and calculating techniques as they relate to United States Pharmacopeia (USP) 795 (non-sterile) compounding in pharmacy practice. The student will be able to:
17.01	Convey an understanding of United States Pharmacopeia (USP) 795 standards.
17.02	Convert measurements within the apothecary, avoirdupois, household, and metric systems.
17.03	Perform common pharmaceutical calculations.
17.04	Identify and utilize common pharmaceutical weighing equipment.
17.05	Identify and utilize common pharmaceutical volume measurement equipment.
17.06	Accurately demonstrate the technique of preparing common non-sterile pharmaceutical compounds.

	17.07 Summarize, evaluate and describe the technician's role in quality assurance activities as related to the preparation of non-sterile products.
18.0	Demonstrate basic knowledge and skills in areas of anatomy/ physiology, pharmacology, and drug classification relevant to pharmacy technicians. The student will be able to:
	18.01 Evaluate and apply anatomical terminology to describe the location of parts or areas of the body and related disease processes.
	18.02 Define the major classifications of pharmaceuticals and conditions treated.
	18.03 Demonstrate knowledge of trade and generic name equivalents.
	18.04 Evaluate the pharmacy technician’s understanding of pharmacology, including drug classifications, mechanisms of action, common side effects, and interactions.
	18.05 Identify at least one official compendium of standards for quality and purity of drug monographs.
	18.06 Convey an understanding of Investigational Drugs, Risk Evaluation and Mitigation Strategies (REMS). off-label indications, and emerging drug therapy.
	18.07 Demonstrate an understanding of common adult doses of medications, duration of common drug therapies, and respective contraindications, including the BEERS Criteria.
	18.08 Identify potential interactions that require a pharmacist’s intervention pertaining to food/alcohol, herbal, OTC, and/or prescription medications
	18.09 Identify allergy histories during the medication reconciliation process and discern “allergy” vs “side effect” in optimizing care.
19.0	Prepare and deliver medications. The student will be able to:
	19.01 Read and prepare medication orders correctly.
	19.02 Demonstrate institutional pharmacy dispensing processes.
	19.03 Compare all new orders with medications listed on profiles while noting any changes.
	19.04 Utilize special precautions in the preparation of medications for pediatric patients.
	19.05 Explain how to safely transport medications, being aware of hazards, theft, legal implications of accidental loss, and other consequences.
	19.06 Understand how to correctly fill and deliver medication.
	19.07 Collect data from the medication administration record.
	19.08 Describe the use of automated medication dispensing equipment.
20.0	Repackage unit-dose medications. The student will be able to:
	20.01 Locate the correct stock container.

	20.02 Operate unit dose packaging equipment.
	20.03 Measure, count, and place the individual dose in appropriate containers.
	20.04 Understand precautions used when packaging unit-dose hazardous drugs.
	20.05 Record repackaged medication data correctly.
	20.06 Summarize, evaluate, and describe the technician's role in quality assurance activities as related to repackaging unit-dose medication.
21.0	Prepare United States Pharmacopeia (USP) 797 and USP 800 sterile products. The student will be able to:
	21.01 Convey an understanding of United States Pharmacopeia (USP) 797 regulations.
	21.02 Convey an understanding of United States Pharmacopeia (USP) 800 regulations.
	21.03 Compare the medication order with the label on the vial and check the expiration date of the product.
	21.04 Calculate drug dosage for parenteral use.
	21.05 Reconstitute parenteral medications.
	21.06 Demonstrate aseptic technique to withdraw medication from stock vial, measure correct quantity as instructed, select and insert it into IV solution without error.
	21.07 Demonstrate aseptic technique to withdraw medication from an ampule using a filter needle/straw.
	21.08 Prepare parenteral solutions using proper aseptic technique.
	21.09 Understand the preparation of Total Parenteral Nutrition (TPN) solutions.
	21.10 Understand the preparation of chemotherapeutic agents using proper safety techniques.
	21.11 Understand the appropriate technique while using specialized equipment such as: laminar flow hoods, filters, pumps, automated compounders, and barrier isolators.
	21.12 Place label on IV solution container and record appropriately.
	21.13 Perform a quality control check of the completed product.
	21.14 Convey an understanding of the proper storage and disposal requirements of reconstituted and non-reconstituted IV solutions.
	21.15 Convey an understanding of the proper storage and disposal of hazardous drugs.
	21.16 Summarize, evaluate, and describe the technician's role in quality assurance activities as related to the preparation of sterile products.

21.17 Understand the concept of Diversion Surveillance to assist in the evaluation of mishandling narcotics suggestive of diversion.

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as, experimental, quality, and safety procedures are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate and troubleshoot equipment/tools used to make observations. Students understand measurement error; and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

Clinical practicum experiences are an integral part of this program.

Special Notes

Due to the clinical experiences students are engaged in through the program and to ensure the safety of both the students and the patients the recommended student to instructor ratio in the classroom is 20:1 and in the lab is 4:1.

It is recommended that program completers take a national certification upon successful program completion.

This program meets the Department of Health's education requirements for HIV/AIDS, Domestic Violence and Prevention of Medical Errors. Although not a requirement for initial licensure, it is a requirement for renewal, therefore the instructor **may** provide a certificate for renewal purposes to the student verifying these requirements have been met.

If students in this program are seeking a licensure, certificate or registration through the Department of Health, please refer to 456.0635, F.S. for more information on disqualification for a license, certificate, or registration through the Department of Health.

The Core should be taken first in the program. Following the successful completion of the core, the student is eligible to take the National Health Care Foundation Skill Standards Assessment with instructor approval and the completion of a portfolio.

Career and Technical Student Organization (CTSO)

CTSOs are co-curricular career and technical student organizations providing leadership training and reinforcing specific career and technical skills. Career and Technical Student Organizations provide activities for students as an integral part of the instruction offered. Other CTSOs not listed in this curriculum framework or recognized by the Florida Department of Education are permissible provided they support student mastery over the standards and benchmarks of this curriculum framework.

Basic Skills

In Career Certificate programs offered for 450 hours or more, in accordance with Rule 6A-10.040, F.A.C., the minimum basic skills grade levels required for postsecondary adult career and technical students to complete this program are: Computation (Mathematics) and Communications

(Reading and Language Arts). These grade level numbers correspond to a grade equivalent score obtained on a state designated basic skills examination.

Adult students with disabilities, as defined in Section 1004.02, Florida Statutes, may be exempted from meeting the Basic Skills requirements (Rule 6A-10.040). Students served in exceptional student education (except gifted) as defined in s. 1003.01, F.S., may also be exempted from meeting the Basic Skills requirement. Each school district and Florida College System Institution must adopt a policy addressing procedures for exempting eligible students with disabilities from the Basic Skills requirement as permitted in Section 1004.91, F.S.

Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

Note: postsecondary curriculum and regulated secondary programs cannot be modified.

Program Length

In accordance with Rule 6A-10.024, F.A.C. an ATD program consists of a course of study that is part of an AS or AAS degree program, is less than 60 credit hours, is approximately 50% of the technical component (non-general education), and leads to employment in a specific occupation. An ATD program may consist of either technical credit or college credit.

Students must have a high school diploma, a GED, or a certificate of completion to be admitted to an ATD program. Within six weeks of entry, students in ATD programs of 450 or more hours must be tested pursuant to Rule 6A-10.040, F.A.C. and if below minimum standards for completion from the program, must receive remedial instruction. The minimum standards must be at least the equivalent of a score of ten (10) on all sections of basic skills test approved in Rule 6A-10.040, F.A.C. Students must successfully complete all remedial instruction before completing the ATD.

Community Colleges may offer either college or career credit toward the ATD. A Career Center in a public school district may offer an ATD program only as technical credit, with college credit awarded to a student upon articulation to a community college (Section 1004.02, F.S.)

When offered at a community college the standard length of this program is 40 credits. When offered at a technical center the standard length of this program is 1050 clock hours.

In accordance with Rule 6A-10.024, F.A.C. all faculty providing instruction must have at least a baccalaureate degree or an associate degree with demonstrated competencies in the specific instructional program as defined by the Southern Association of Colleges and Schools.

Florida Department of Education
Curriculum Framework

Program Title: **Healthcare Support Specialist**
Career Cluster: **Health Science**

College Credit Certificate	
CIP Number	0351081401
Program Type	College Credit Certificate (CCC)
Program Length	21 credit hours
CTSO	HOSA
SOC Codes (all applicable)	For program SOC codes, please see the Program and Course Tables section of the CTE Program Resources page linked below.
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml

Purpose

This certificate program is part of the Medical Assisting Advanced AS degree program (1351080103).

A College Credit Certificate consists of a program of instruction of less than sixty (60) credits of college-level courses, which is part of an AS or AAS degree program and prepares students for entry into employment (Rule 6A-14.030, F.A.C.).

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Health Science career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of the Health Science career cluster.

This program is designed to prepare students for employment as healthcare support workers.

The content includes but is not limited to assisting management by expediting and facilitating the maintenance and production of routine administrative and clinical tasks; performing medical administrative activities such as preparing and updating of patients' medical histories and discharge summaries; learn the special terminology and procedures associated with medicine and assist in the administration of policy. Emphasis is placed upon students' theoretical and clinical proficiency so they will be well prepared for employment as medical office support staff and healthcare support workers in medical offices, hospitals, and other healthcare settings.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Florida's Career Readiness Skills for CTE Programs

Employability Skills	
01.0	Apply academic skills to workplace scenarios.
	01.01 Use reading skills.
	01.02 Use writing skills.
	01.03 Use mathematical strategies and procedures.
	01.04 Use scientific principles and procedures.
02.0	Design a solution to an industry problem.
	02.01 Use critical thinking.
	02.02 Use creativity.
	02.03 Make sound decisions.
	02.04 Solve problems.
	02.05 Reason.
	02.06 Plan and organize.
03.0	Manage resources within an industry project
	03.01 Manage time.
	03.02 Manage money or resources.
	03.03 Manage materials.
	03.04 Manage personnel.
04.0	Oversee the subcomponents, operations and output of a technical or organizational system.
	04.01 Manage systems.
	04.02 Monitor systems.
	04.03 Improve systems.
05.0	Use information for decision making.
	05.01 Locate information.
	05.02 Organize information.
	05.03 Use information.

	05.04 Analyze information.
	05.05 Communicate information.
06.0	Apply relevant technology to workplace scenarios to aid productivity.
	06.01 Use technology.
07.0	Interpret and express interpersonal communication.
	07.01 Communicate verbally.
	07.02 Listen actively.
	07.03 Comprehend written material.
	07.04 Convey information in writing.
	07.05 Communicate nonverbally.
	07.06 Interpret nonverbal communication.
08.0	Interact with others to accomplish workplace goals.
	08.01 Collaborate with others in a team.
	08.02 Respond to customer needs.
	08.03 Exercise leadership.
	08.04 Negotiate to resolve conflict.
	08.05 Respect others.
09.0	Manage personal behavior to maximize productivity and professional growth.
	09.01 Demonstrate responsibility and self-discipline.
	09.02 Adapt and show flexibility.
	09.03 Work independently.
	09.04 Demonstrate a willingness to learn.
	09.05 Demonstrate integrity.
	09.06 Demonstrate professionalism.
	09.07 Take initiative.
	09.08 Display positive attitude.
	09.09 Take responsibility for professional growth.

Job Attainment	
10.0	Find, assess and apply to job opportunities.
10.01	Identify online job posts relevant to his or her career aspirations.
10.02	Compare and contrast the job posts' required qualifications, job duties, compensation, benefits and employers.
10.03	Define what information, documentation and writing prompts are required for the positions.
11.0	Communicate personal competence, character and fit for a job opportunity.
11.01	Develop a resume.
11.02	Write a cover letter.
11.03	Curate a professional portfolio that includes work products.
11.04	Prepare for and experience a mock job interview.
12.0	Cultivate and leverage relationships to professionally advance.
12.01	Request a signed reference letter, letter of recommendation and/or an online skill/professionalism endorsement.
12.02	Develop a plan to cultivate a professional digital footprint.
12.03	Develop a networking plan for a specific industry of interest.

Standards

After successfully completing this program, the student will be able to perform the following:

01.0 Demonstrate the ability to communicate and use interpersonal skills effectively.
02.0 Demonstrate an understanding of and apply wellness and disease concepts.
03.0 Recognize and practice safety and security procedures.
04.0 Recognize and practice infection control procedures.
05.0 Demonstrate knowledge of blood-borne diseases, including HIV/AIDS.
06.0 Apply basic math and science skills.
07.0 Demonstrate an understanding of anatomy and physiology concepts.
08.0 Describe the cardiovascular system.
09.0 Recognize and identify collection reagents supplies, equipment, and interfering chemical substances.
10.0 Practice infection control following standard precautions.

Florida Department of Education
Student Performance Standards

Program Title: **Healthcare Support Specialist**
CIP Number: **0351081401**
Program Length: **21 credit hours**

This certificate program is part of the Medical Assisting Advanced AS degree program (1351080103). At the completion of this program, the student will be able to:	
01.0	Demonstrate the ability to communicate and use interpersonal skills effectively. The student will be able to:
01.01	Develop basic speaking and listening skills.
01.02	Develop basic observational skills and related documentation strategies in written and oral form.
01.03	Identify characteristics of successful and unsuccessful communication, including communication styles and barriers.
01.04	Respond to verbal and non-verbal cues.
01.05	Compose written communication using correct spelling, grammar, formatting, confidentiality, and specific formats of letter writing.
01.06	Use appropriate medical terminology and abbreviations.
01.07	Recognize the importance of courtesy and respect for patients and other healthcare workers and maintain good interpersonal relationships.
01.08	Recognize the importance of patient education regarding healthcare.
01.09	Adapt communication skills to varied levels of understanding and cultural orientation, including diverse age, cultural, economic, ethnic, and religious groups.
01.10	Adapt elements of communication using the sender-receiver model.
01.11	Distinguish between and report subjective and objective information.
01.12	Report relevant information in order of occurrence.
02.0	Demonstrate an understanding of and apply wellness and disease concepts. The student will be able to:
02.01	Describe strategies for prevention of disease, including health screenings and examinations.
02.02	Identify personal health practices and environmental factors that affect optimal function of the major body systems.
02.03	Identify psychological reactions to illness, including defense mechanisms.

	02.04 Identify complementary and alternative health practices.
03.0	Recognize and practice safety and security procedures. The student will be able to:
	03.01 Recognize safe and unsafe working conditions and report safety hazards.
	03.02 Demonstrate the safe use of medical equipment.
	03.03 Identify and practice security procedures for medical supplies and equipment.
	03.04 Demonstrate personal safety procedures based on the Occupational Safety and Health Administration (OSHA) and the Centers for Disease Control and Prevention (CDC) regulations, including standard precautions.
04.0	Recognize and practice infection control procedures. The student will be able to:
	04.01 Define principles of infection control, including standard and transmission-based precautions.
	04.02 Demonstrate knowledge of medical asepsis and practice procedures such as hand washing and isolation.
	04.03 Describe how to correctly dispose of biohazardous materials according to appropriate government guidelines, such as OSHA.
05.0	Demonstrate knowledge of blood-borne diseases, including HIV/AIDS. The student will be able to:
	05.01 Recognize emerging diseases and disorders.
	05.02 Distinguish between fact and fallacy about the transmission and treatment of diseases caused by blood-borne pathogens, including Hepatitis B.
	05.03 Identify community resources and services available to individuals with diseases caused by blood-borne pathogens.
	05.04 Identify “at-risk” behaviors which promote the spread of diseases caused by bloodborne pathogens and the public education necessary to combat the spread of these diseases.
	05.05 Apply infection control techniques designed to prevent the spread of diseases caused by blood-borne pathogens to the care of all patients following CDC guidelines.
	05.06 Demonstrate knowledge of the legal aspects of HIV/AIDS, including testing.
06.0	Apply basic math and science skills. The student will be able to:
	06.01 Draw, read, and report on graphs, charts, and tables.
	06.02 Measure time, temperature, distance, capacity, and mass/weight.
	06.03 Make, use, and convert using both traditional and metric units.
	06.04 Make estimations and approximations and judge the reasonableness of the result.

	06.05 Convert from regular to 24-hour time.
	06.06 Demonstrate the ability to evaluate and draw conclusions.
	06.07 Organize and communicate the results obtained by observation and experimentation.
	06.08 Ask appropriate scientific questions and recognize what is involved in experimental approaches to the solution of such questions.
	06.09 Calculate ratios.
07.0	Demonstrate an understanding of anatomy and physiology concepts. The student will be able to:
	07.01 Define the terms anatomy and physiology.
	07.02 Define both medical terms and abbreviations related to all body systems.
	07.03 Define the principal directional terms, planes, quadrants, and cavities used in describing the body and the association of body parts to one another.
	07.04 Define the levels of organization of the body from cells to systems.
	07.05 Describe the function of the 11 major organ systems of the body (1) integumentary, (2) skeletal, (3) muscular, (4) nervous, (5) endocrine, (6) cardiovascular, (7) lymphatic, (8) respiratory, (9) digestive, (10) urinary, and (11) reproductive.
	07.06 Describe signs and symptoms of common pathologies.
	07.07 Discuss diagnostic options to identify common disease pathology and treatment options.
	07.08 Compare structure and function of the body across the life span.
08.0	Describe the cardiovascular system. The student will be able to:
	08.01 Label the heart and surrounding structures.
	08.02 List the functions of the heart and surrounding structures.
	08.03 Trace the flow of blood through the body.
	08.04 Identify and describe the electrical conduction system.
09.0	Recognize and identify collection reagents supplies, equipment, and interfering chemical substances. The student will be able to:
	09.01 Identify and discuss the proper use of appropriate types of equipment needed to collect various clinical laboratory blood specimens by venipuncture.
	09.02 Define and utilize correct medical terminology and metric measurement needed for specimen collection.

10.0	Practice infection control following standard precautions. The student will be able to:
	10.01 Define the term “hospital-acquired infection.”
	10.02 Describe and practice procedures for infection prevention, including hand washing skills.
	10.03 Discuss transmission-based precautions.
	10.04 Identify potential routes of infection and their complications.

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools, and equipment, as well as experimental, quality, and safety procedures, are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate, and troubleshoot equipment/tools used to make observations. Students understand measurement error and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

Career and Technical Student Organization (CTSO)

CTSOs are co-curricular career and technical student organizations providing leadership training and reinforcing specific career and technical skills. Career and Technical Student Organizations provide activities for students as an integral part of the instruction offered. Other CTSOs not listed in this curriculum framework or recognized by the Florida Department of Education are permissible provided they support student mastery over the standards and benchmarks of this curriculum framework.

Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology, and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

Florida Department of Education
Curriculum Framework

Program Title: **Paramedic**
Career Cluster: **Health Science**

College Credit Certificate	
CIP Number	0351090405
Program Type	College Credit Certificate (CCC)
Program Length	42 credit hours
CTSO	HOSA
SOC Codes (all applicable)	For program SOC codes, please see the Program and Course Tables section of the CTE Program Resources page linked below.
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml

Purpose

This certificate program is part of the Emergency Medical Services AS degree program (1351090402).

A College Credit Certificate consists of a program of instruction of less than sixty (60) credits of college-level courses, which is part of an AS or AAS degree program and prepares students for entry into employment (Rule 6A-14.030, F.A.C.).

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Health Science career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of Health Science career cluster.

This is an instructional program that prepares students for employment as paramedics (Emergency Medical Technicians & Paramedics) to function at the basic pre-hospital paramedic level and treat various medical/trauma conditions, using appropriate equipment and materials. The program prepares students for certification as paramedics in accordance with Chapter 64J-1 of the Florida Administrative Code. The program must be approved by the Department of Health, Office of Emergency Medical Services, and the curriculum must adhere to the US Department of Transportation, National EMS Educational Standards for Paramedic. This is the second level for a career in emergency medical services in Florida.

The content includes but is not limited to: patient assessment, advanced airway management, cardiovascular emergencies, external and internal bleeding and shock, traumatic injuries, fractures, dislocations, sprains, poisoning, heart attack, stroke, diabetes, pharmacology, medication administration, respiratory emergencies, endocrine emergencies, acute abdomen, communicable diseases, patients with abnormal behavior,

substance abuse, the unconscious state, emergency childbirth, pediatric and geriatric emergencies, burns, environmental hazards, communications, documentation, extrication, mass casualty incident, incident command system, and transportation of patient.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Program Structure

When developing the course sequence for the local implementation of this program, select courses that:

- Meet the skill development requirements of the standards and benchmarks of this program.
- Where reasonable and practicable, align with programs offered by your institution or other postsecondary institutions in Florida, including:
  - Related AS and AAS degrees.
  - Baccalaureate degrees within the same career pathway and/or Federal CIP code.

Visit FloridaShines' Discover Programs website to identify other institutions that offer similar programs to review their course sequencing. Where appropriate, course alignment between institutions offering related programs can facilitate interagency student articulation.

Visit FloridaShines' Common Prerequisites Manual to identify courses that are prerequisites for admission into an upper division program. When sub-baccalaureate courses are aligned to the course admissions requirements of baccalaureate programs with the same career pathway, students can enter upper division coursework seamlessly.

Regulated Programs

This program meets the Department of Health trauma score card methodologies and Sudden Unexpected Infant Death Syndrome (SUIDS) training education requirements. Upon completion of this program, the instructor will provide a certificate to the student verifying that these requirements have been met. This program also meets the Department of Health's education requirements for HIV/AIDS, Domestic Violence and Prevention of Medical Errors. Although not a requirement for initial licensure, it is a requirement for renewal, therefore the instructor **may** provide a certificate for renewal purposes to the student verifying these requirements have been met.

A Paramedic program must be taught by faculty meeting the qualifications as set forth in 64J-1.020, F.A.C.

Florida Statute (F.S.) 401.2701, requires that the instructor-student ratio should not exceed 1:6.

Field internship shall include a competency-based program to assure appropriate pre-hospital assessment and management of medical and trauma patients, as well as associated manual skills. The field internship activity shall include supervised experience in the field setting with a certified ALS transport EMS agency or ALS fire department. Refer to 64J-1.20 for additional requirements of the field internship inside of the paramedic program.

Pursuant 401.2701, F.S,. to Paramedic programs must be available only to Florida-certified emergency medical technicians or an emergency medical technician applicant who will obtain Florida certification prior to completion of phase one of the paramedic program and EMT certification must be maintained through the program.

It is strongly recommended this program be accredited by Commission on Accreditation of Allied Health Education Programs (CAAHEP).
NREMT requires that all paramedic students graduate from a CAAHEP-accredited Paramedic program (or an education program that has been issued a CoAEMSP "Letter of Review") that meets or exceeds the National Emergency Medical Services Education Standards for Paramedic.

The Student Performance Standards for Paramedic were adapted and condensed from the most current US Department of Transportation, National EMS Educational Standards for the Paramedic. Administrators and instructors should refer to these materials for additional detail.

Florida's Career Readiness Skills for CTE Programs

Employability Skills	
01.0	Apply academic skills to workplace scenarios.
01.01	Use reading skills.
01.02	Use writing skills.
01.03	Use mathematical strategies and procedures.
01.04	Use scientific principles and procedures.
02.0	Design a solution to an industry problem.
02.01	Use critical thinking.
02.02	Use creativity.
02.03	Make sound decisions.
02.04	Solve problems.
02.05	Reason.
02.06	Plan and organize.
03.0	Manage resources within an industry project
03.01	Manage time.
03.02	Manage money or resources.
03.03	Manage materials.
03.04	Manage personnel.
04.0	Oversee the subcomponents, operations and output of a technical or organizational system.
04.01	Manage systems.
04.02	Monitor systems.
04.03	Improve systems.
05.0	Use information for decision making.
05.01	Locate information.
05.02	Organize information.
05.03	Use information.

	05.04 Analyze information.
	05.05 Communicate information.
06.0	Apply relevant technology to workplace scenarios to aid productivity.
	06.01 Use technology.
07.0	Interpret and express interpersonal communication.
	07.01 Communicate verbally.
	07.02 Listen actively.
	07.03 Comprehend written material.
	07.04 Convey information in writing.
	07.05 Communicate nonverbally.
	07.06 Interpret nonverbal communication.
08.0	Interact with others to accomplish workplace goals.
	08.01 Collaborate with others in a team.
	08.02 Respond to customer needs.
	08.03 Exercise leadership.
	08.04 Negotiate to resolve conflict.
	08.05 Respect others.
09.0	Manage personal behavior to maximize productivity and professional growth.
	09.01 Demonstrate responsibility and self-discipline.
	09.02 Adapt and show flexibility.
	09.03 Work independently.
	09.04 Demonstrate a willingness to learn.
	09.05 Demonstrate integrity.
	09.06 Demonstrate professionalism.
	09.07 Take initiative.
	09.08 Display positive attitude.
	09.09 Take responsibility for professional growth.

Job Attainment	
10.0	Find, assess and apply to job opportunities.
10.01	Identify online job posts relevant to his or her career aspirations.
10.02	Compare and contrast the job posts' required qualifications, job duties, compensation, benefits and employers.
10.03	Define what information, documentation and writing prompts are required for the positions.
11.0	Communicate personal competence, character and fit for a job opportunity.
11.01	Develop a resume.
11.02	Write a cover letter.
11.03	Curate a professional portfolio that includes work products.
11.04	Prepare for and experience a mock job interview.
12.0	Cultivate and leverage relationships to professionally advance.
12.01	Request a signed reference letter, letter of recommendation and/or an online skill/professionalism endorsement.
12.02	Develop a plan to cultivate a professional digital footprint.
12.03	Develop a networking plan for a specific industry of interest.

Standards

After successfully completing this program, the student will be able to perform the following:

01.0 Demonstrate a fundamental depth, foundational breadth of knowledge of the History of EMS and a complex depth, comprehensive breadth of knowledge of EMS Systems.
02.0 Demonstrate a fundamental depth, foundational breath of knowledge of research principles to interpret literature and advocate evidence-based practice.
03.0 Demonstrate a complex depth, comprehensive breadth of knowledge of workforce safety and wellness.
04.0 Demonstrate a complex depth, comprehensive breadth of knowledge of the principles of medical documentation and report writing.
05.0 Demonstrate a complex depth, comprehensive breadth of knowledge of EMS communication system.
06.0 Demonstrate a complex depth, comprehensive breadth of knowledge of the therapeutic communication principles.
07.0 Demonstrate a complex depth, comprehensive breadth of knowledge of medical legal and ethical concepts related to EMS.
08.0 Integrate a complex depth, comprehensive breadth of knowledge of anatomy and physiology of all human systems.
09.0 Integrate a comprehensive knowledge in the use of medical terminology and abbreviations into written and oral communication with health care professionals.
10.0 Demonstrate a complex knowledge of pathophysiology of major systems.
11.0 Integrate the knowledge of the physiological, psychological, and sociological changes throughout human development.
12.0 Demonstrate a fundamental knowledge of the principles of public health.
13.0 Demonstrate a complex depth, comprehensive breadth of knowledge in the principles of pharmacology.
14.0 Demonstrate a complex depth, comprehensive breadth of knowledge of medication administration within the scope of practice of the paramedic.
15.0 Demonstrate a complex depth, comprehensive breadth of knowledge of emergency medications within the scope of practice for the paramedic.
16.0 Demonstrate a complex depth, comprehensive breadth of knowledge of airway management within the scope of practice of the paramedic, patients of all ages.
17.0 Demonstrate a complex depth, comprehensive breadth of knowledge of respiration within the scope of practice of the paramedic, patients of all ages.
18.0 Demonstrate a complex breadth, comprehensive breadth of knowledge of ventilator assessment and management, patients of all ages.
19.0 Demonstrate a complex depth, comprehensive breadth of knowledge of scene management.
20.0 Demonstrate a complex depth, comprehensive breadth of knowledge of the primary assessment for all patient situations.
21.0 Demonstrate a complex depth, comprehensive breath of knowledge of the components of history taking.
22.0 Demonstrate a complex depth, comprehensive breadth of knowledge of techniques used for a secondary assessment, patients of all ages
23.0 Demonstrate a fundamental depth, foundational breadth of knowledge of monitoring devices within the scope of practice of the paramedic.
24.0 Demonstrate a complex depth, comprehensive breadth of knowledge of how and when to perform a reassessment for all patient situations.
25.0 Demonstrate a complex depth, comprehensive breadth of knowledge of pathophysiology, assessment, and management of medical complaints.
26.0 Demonstrate a complex depth, comprehensive breadth of knowledge of neurologic disorders/emergencies, patients of all ages.
27.0 Demonstrate a complex depth, comprehensive breadth of knowledge of abdominal and gastrointestinal disorders/emergencies, patients of all ages.
28.0 Demonstrate a complex depth, comprehensive breadth of knowledge of immunology disorders/emergencies, patients of all ages.

29.0 Demonstrate a complex depth, comprehensive breadth of knowledge of assessment and management of a patient who may have an infectious disease, patient of all ages.
30.0 Demonstrate a complex depth, comprehensive breadth of knowledge in endocrine disorders/emergencies, patients of all ages.
31.0 Demonstrate a complex depth, comprehensive breadth of knowledge regarding the assessment and management of psychiatric disorders, cognitive and behavioral emergencies.
32.0 Demonstrate a complex depth, comprehensive breadth of knowledge of cardiovascular disorders/ emergencies, patients of all ages.
33.0 Demonstrate a complex depth, comprehensive breadth of knowledge of the assessment and management of toxicology emergencies including psychosocial aspects of age-related assessment and treatment modifications for the major or common diseases and patients of all ages.
34.0 Demonstrate a complex depth, comprehensive breadth of knowledge of the assessment and management of respiratory disorders, include psychosocial aspects of age-related assessment and treatment modifications for the major or common diseases and/ or emergencies associated emergencies, patients of all ages.
35.0 Demonstrate a complex depth, foundational breadth of knowledge of the assessment and management of hematology disorders/ emergencies, patients of all ages.
36.0 Demonstrate a complex depth, comprehensive breadth of knowledge of genitourinary and renal emergencies to include psychosocial aspects of age-related assessment and treatment modifications for the major or common diseases and/or emergencies, patients of all ages.
37.0 Demonstrate a complex depth, comprehensive breadth of knowledge of the assessment findings and the management of gynecology disorders Include psychosocial aspects of age-related assessment and treatment modifications for the major or common diseases and/or /emergencies, patients of all ages.
38.0 Demonstrate a fundamental depth, foundation breadth of knowledge of the assessment and management of non-traumatic fractures, patients of all ages.
39.0 Demonstrate a fundamental depth, foundational breadth of knowledge of the assessment and management of common or major diseases of the eyes, ears, nose, and throat, patients of all ages.
40.0 Demonstrate the integration of comprehensive knowledge of cause and pathophysiology into management of shock (include psychosocial aspect of age-related assessment and treatment modifications for pediatric and geriatric patients).
41.0 Demonstrate the integration of a comprehensive knowledge of causes and pathophysiology into the management of cardiac arrest and respiratory failure (including psychosocial aspects of age-related assessment and treatment modifications for pediatric and geriatric patients).
42.0 Demonstrate a complex depth, comprehension breadth of knowledge of pathophysiology, assessment and management of bleeding, patients of all ages.
43.0 Demonstrate a complex depth, comprehensive breadth of knowledge of pathophysiology, assessment, and management of chest trauma, patients of all ages.
44.0 Demonstrate a complex depth, comprehensive breadth of knowledge of pathophysiology, assessment, and management of abdominal and genitourinary trauma, patients of all ages.
45.0 Demonstrate a fundamental depth, foundational breadth of knowledge of pathophysiology, assessment, and management of orthopedic trauma, patients of all ages.
46.0 Demonstrate a complex depth, comprehensive breadth of knowledge of pathophysiology, assessment, and management of soft tissue trauma. patients of all ages. (Include psychosocial aspects of age- related assessment and treatment modifications for pediatric and geriatric patients).
47.0 Demonstrate a fundamental depth, foundational breadth of knowledge of head, face, neck, and spine trauma, patients of all ages.

48.0 Demonstrate a fundamental depth, foundational breadth of knowledge of nervous system trauma, patients of all ages.
49.0 Demonstrate a complex depth, comprehensive breadth of knowledge of special considerations in trauma, patients of all ages.
50.0 Demonstrate a complex depth, comprehensive breadth of knowledge of environmental emergencies, patients of all ages.
51.0 Demonstrate a complex depth, comprehensive breadth of knowledge of multi-system trauma and blast injuries.
52.0 Demonstrate a complex depth, comprehensive breadth of knowledge of the management of the obstetric patient within the scope of practice of the paramedic.
53.0 Demonstrate a complex depth, comprehensive breadth of knowledge of the management of the neonatal patient within the scope of practice of the paramedic.
54.0 Demonstrate a complex depth, comprehensive breadth of knowledge of the management of the pediatric patient within the scope of practice of the paramedic.
55.0 Demonstrate a complex depth, comprehensive breadth of knowledge of the management of the geriatric patient within the scope of practice of the paramedic.
56.0 Demonstrate a complex depth, comprehensive breadth of knowledge of management of the patient with special challenges within the scope of practice of the paramedic, patients of all ages.
57.0 Demonstrate a simple depth, foundational breadth of knowledge of risks and responsibilities of transport.
58.0 Demonstrate a complex depth, comprehensive breadth of knowledge of establishing and working within the incident management system.
59.0 Demonstrate a simple depth, foundational breadth of knowledge of responding to an emergency during a multiple casualty incident.
60.0 Demonstrate a complex depth, comprehensive breadth of knowledge of air medical transport risks, needs, and advantages.
61.0 Demonstrate a simple depth, simple breadth of knowledge for safe vehicle extrication and use of simple hand tools.
62.0 Demonstrate a simple depth, simple breadth of knowledge of risks and responsibilities of operating in a cold zone at a hazardous material or other special incident.
63.0 Demonstrate a simple depth, simple breadth of knowledge of risks and responsibilities of operating on the scene of a natural or man-made disaster.

Florida Department of Education
Student Performance Standards

Program Title: **Paramedic**
CIP Number: **0351090405**
Program Length: **42 credit hours**

The Paramedic standards and benchmarks in this framework include all of the content, knowledge and skills at the EMT level in addition to the Paramedic objectives. For those standards that state "Review EMT standards and benchmarks", please refer to the EMT curriculum framework for specific objectives.

This certificate program is part of the Emergency Medical Services AS degree program (1351090402). At the completion of this program, the student will be able to:	
01.0	**EMS Systems:** Demonstrate a fundamental depth, foundational breadth of knowledge of the History of EMS and a complex depth, comprehensive breadth of knowledge of EMS Systems. The student will be able to:
01.01	Define terms, including but not limited to: EMS systems, licensure, registration, profession, professionalism, health care professional, ethics, peer review, medical direction, and protocols.
01.02	Describe the attributes of a paramedic as a health care professional.
01.03	Explain paramedic licensure/ certification, recertification, and reciprocity requirements in Florida.
01.04	Explain the importance of maintaining one's paramedic license/certification.
01.05	Describe the benefits of paramedic continuing education.
01.06	Discuss the role of national associations and of a national certification agency.
01.07	Discuss Chapter 401, Florida Statutes (F.S.), and Chapter 64-E, Florida Administrative Code (F.A.C.).
01.08	Discuss the roles of various EMS standard setting agencies.
01.09	Identify the standards (components) of an EMS System as defined by the National Highway Traffic Safety Administration.
01.10	Describe and demonstrate professional behaviors in the following areas: integrity, empathy, self-motivation, appearance and personal hygiene, self-confidence, communications, time management, teamwork and diplomacy, respect, patient advocacy, and careful delivery of service.
01.11	Describe the role of the EMS physician in providing medical direction.
01.12	Discuss examples of local protocols.
01.13	Differentiate between quality improvement and quality assurance.

	01.14 Describe the relationship between a physician on the scene, the paramedic on the scene, and the EMS physician providing on-line medical direction.
	01.15 Describe the role of the paramedic relative to the safety of the crew, the patient, and bystanders.
	01.16 Assess personal practices relative to the responsibility for personal safety, the safety of the crew, the patient, and bystanders.
	01.17 Advocate the need for injury prevention.
	01.18 Discuss the diverse types of EMS services and differences in their provision of care. Including mobile integrated health and community paramedic.
02.0	**Research:** Demonstrate a fundamental depth, foundational breath of knowledge of research principles to interpret literature and advocate evidence-based practice. The student will be able to:
	02.01 Interpret results and reach conclusions.
	02.02 Discuss the importance of evidenced based medicine and medical research and its role in refining EMS practices.
03.0	**Workforce Safety and Wellness:** Demonstrate a complex depth, comprehensive breadth of knowledge of workforce safety and wellness. The student will be able to:
	03.01 Discuss the concept of wellness and its benefits.
	03.02 Discuss how cardiovascular endurance, muscle strength, and flexibility contribute to physical fitness.
	03.03 Describe the impact of shift work on circadian rhythms.
	03.04 Discuss the role of risk assessments and warning signs in cancer and cardiovascular disease.
	03.05 Differentiate between proper from improper body mechanics for lifting and moving patients in emergency and non-emergency situations.
	03.06 Discuss the principles of crew resource management.
	03.07 Describe the problems that a paramedic might encounter in a hostile situation and the techniques used to manage the situation.
	03.08 Describe the equipment available for self-protection when confronted with a variety of adverse situations.
	03.09 Describe the three phases and factors that trigger the stress response.
	03.10 Differentiate between normal/ healthy and detrimental reactions to anxiety and stress.
	03.11 Identify and describe the defense mechanisms and management techniques and resources commonly used to deal with stress.
	03.12 Describe the components of critical incident stress management (CISM).
	03.13 Describe the needs of the paramedic when dealing with death and dying.

	03.14 Discuss the importance of standard precautions and body substance isolation practices.
	03.15 Discuss the principles of disease transmission and prevention measures
	03.16 Discuss the need to treat each patient as an individual, with respect and dignity.
	03.17 Discuss the need to respect the emotional needs of dying patients and their families.
	03.18 Discuss the paramedics' role in performing community risk assessment.
04.0	**Documentation:** Demonstrate a complex depth, comprehensive breadth of knowledge of the principles of medical documentation and report writing. The student will be able to:
	04.01 Identify the general principles regarding the importance of EMS documentation and ways in which documents are used.
	04.02 Demonstrate proper use of medical terminology.
	04.03 Record pertinent administrative information to a given standard.
	04.04 Analyze the documentation for accuracy and completeness, including spelling.
	04.05 Describe the differences between subjective and objective elements of documentation.
	04.06 Describe the potential consequences of illegible, incomplete, or inaccurate documentation.
	04.07 Describe the special considerations concerning patient refusal of transport.
	04.08 Explain how to properly record direct patient or bystander comments.
	04.09 Describe the special considerations concerning mass casualty incident documentation.
	04.10 Identify and record the pertinent, reportable clinical data of each patient interaction.
	04.11 Note and record pertinent negative clinical findings.
	04.12 Demonstrate proper completion of an EMS PCR (patient care record).
05.0	**EMS Communication:** Demonstrate a complex depth, comprehensive breadth of knowledge of EMS communication system. The student will be able to:
	05.01 Identify the role of verbal, written, and electronic communications in the provision of EMS.
	05.02 Describe the phases of communications necessary for an emergency response and transport.
	05.03 Discuss the importance of proper terminology when communicating during an emergency.

	05.04 Discuss factors that impede or enhance effective verbal and written communications.
	05.05 Discuss the legal implications of written communications.
	05.06 Identify the components of the local EMS communications system and describe their function and use.
	05.07 Identify and differentiate among the following communications systems: simplex, multiplex, duplex, trunked, digital communications, and cellular telephone.
	05.08 Describe the functions and responsibilities of the Federal Communications Commission.
	05.09 Describe how emergency medical dispatch (EMD) functions as an integral part of the EMS system.
	05.10 List appropriate information to be gathered by the telecommunicator.
	05.11 Demonstrate an organized and concise radio transmission
	05.12 Demonstrate an organized and concise patient report upon transfer of care.
06.0	**Therapeutic Communication:** Demonstrate a complex depth, comprehensive breadth of knowledge of the therapeutic communication principles. The students will be able to:
	06.01 Demonstrate health care literacy when communicating with patients.
	06.02 Identify internal and external factors that affect a patient/ bystander interview conducted by a paramedic.
	06.03 Review the strategies for developing patient rapport.
	06.04 Summarize the methods to assess mental status based on interview techniques.
	06.05 Discuss the strategies for interviewing difficult patients.
	06.06 Summarize developmental considerations, patients of all ages that influence patient interviewing.
	06.07 Review unique interviewing techniques necessary to employ with patients who have special needs.
	06.08 Discuss interviewing considerations used by paramedics in cross-cultural communications.
07.0	**Medical/Legal and Ethics:** Demonstrate a complex depth, comprehensive breadth of knowledge of medical legal and ethical concepts related to EMS. The student will be able to:
	07.01 Differentiate between legal and ethical responsibilities.

	07.02 Discuss State of Florida and Federal special reporting situations including: • Abuse • Sexual assault • Gunshot and knife wounds • Communicable disease • Animal bites
	07.03 Review terms, including but not limited to, the following: abandonment, battery, breach of duty, consent (expressed, implied, informed, voluntary), DNR orders, duty to act, emancipated minor, false imprisonment, liability, libel, negligence, proximate cause, scope of practice, slander, and tort.
	07.04 Differentiate between the scope of practice and the standard of care for paramedic practice.
	07.05 Discuss the concept of medical direction, including off-line medical direction and on-line medical direction, and its relationship to the standard of care of a paramedic.
	07.06 Review the four elements that must be present in order to prove negligence.
	07.07 Review the legal concept and limitations of immunity, including Good Samaritan statutes and governmental immunity, as it applies to the paramedic.
	07.08 Review the importance and necessity of patient confidentiality and the standards for maintaining patient confidentiality that apply to the paramedic.
	07.09 Review consent to include expressed, informed, implied, and involuntary.
	07.10 Discuss the importance of patient rights and advocating for the patient's best interest.
	07.11 Demonstrate appropriate patient management techniques in a refusal of care situation.
	07.12 Discuss the issues of abandonment, negligence, false imprisonment, and battery and their implications to the paramedic.
	07.13 Describe the actions that the paramedic should take to preserve evidence at a crime or accident scene.
	07.14 Describe the importance of providing accurate communication (oral and written) in substantiating an incident.
	07.15 Describe the criteria necessary to honor an advance directive in Florida.
08.0	**Anatomy and Physiology:** Integrate a complex depth, comprehensive breadth of knowledge of anatomy and physiology of all human systems. The student will be able to:
	08.01 Review the EMT standards and benchmarks for the anatomy and physiology.
	08.02 Demonstrate comprehensive knowledge of anatomy and physiology as it applies to paramedic practice.
09.0	**Medical Terminology:** Integrate a comprehensive knowledge in the use of medical terminology and abbreviations into written and oral communication with health care professionals. The student will be able to:
	09.01 Review the EMT standards and benchmarks for medical terminology.

	09.02 Demonstrate a comprehensive knowledge of medical terminology as it applies to paramedic practice.
10.0	**Pathophysiology:** Demonstrate a complex knowledge of pathophysiology of major systems. The student will be able to:
	10.01 Describe the factors that precipitate disease in the human body including familial diseases and risk factors.
	10.02 Describe environmental risk factors.
	10.03 Define and discuss the pathogenesis, signs, and symptoms of distributive, obstructive, neurogenic, anaphylactic, and septic shock.
	10.04 Discuss multiple organ dysfunction syndrome (MODS).
	10.05 Describe alterations in cells and tissues including cellular adaptation, cellular injury, manifestation of cellular injury, and cellular death/necrosis.
	10.06 Describe genetics and familial diseases and the role they play in pathophysiology.
	10.07 Describe the self–defense mechanisms of inflammation and immune responses and their relationships to pathophysiology.
11.0	**Life Span Development:** Integrate the knowledge of the physiological, psychological, and sociological changes throughout human development. The student will be able to:
	11.01 Compare, contrast, and analyze the physiological and psychosocial characteristics of patients of all ages.
12.0	**Public Health:** Demonstrate a fundamental knowledge of principles of public health. The student will be able to:
	12.01 Review the EMT standards and benchmarks for the public health.
	12.02 Apply a fundamental knowledge of the principles of public health, epidemiology, health promotion, and illness and injury prevention.
	12.03 Discuss human trafficking and the need to recognize potential victims.
	12.04 Review Electronic Health Records in EMS.
	12.05 Discuss the roles of governmental and nongovernmental agencies in public health.
	12.06 Review the mission and goals of public health.
	12.07 Discuss the social, geographic, economic, and demographic factors that influence public health.
	12.08 Demonstrate the ability to provide patient and community education on public health topics.
	12.09 Discuss unique concerns in the pediatric, geriatric, and special populations.
	12.10 Describe the role of EMS in health screenings, vaccinations, and immunizations.

	12.11 Discuss the impacts of the political, social, and economic environments on public health.
	12.12 Review the various types of infectious disease that are a threat to public health.
	12.13 Describe the various patient dispositions, choosing appropriate destinations, and transport modes.
	12.14 Define and understand bioinformatics and its role in EMS and public health.
13.0	**Principles of Pharmacology:** Demonstrate a complex depth, comprehensive breadth of knowledge in the principles of pharmacology. The student will be able to:
	13.01 Discuss medication administration safety.
	13.02 Differentiate among the chemical, generic (nonproprietary), and trade (proprietary) names of a drug.
	13.03 List the four main sources of drug products.
	13.04 Describe how drugs are classified.
	13.05 List legislative acts controlling drug use and abuse in the United States.
	13.06 Differentiate among Schedule I, II, III, IV, and V substances.
	13.07 Use reference materials to research medications.
	13.08 Discuss standardization of drugs.
	13.09 Discuss investigational drugs, including the Food and Drug Administration (FDA) approval process and the FDA classifications for newly approved drugs.
	13.10 Discuss the paramedic's responsibilities and scope of practice pertinent to the administration of medications.
	13.11 Review best practices and legal requirements for the storage and security of medications.
	13.12 List and describe available drug forms.
	13.13 List and differentiate all methods and routes of medication administration covered in the current National EMS Scope of Practice Model.

	13.14 Describe the process of: • Pharmacokinetics • Pharmacodynamics • Theories of drug action • Drug-response relationship • Factors altering drug responses • Predictable drug responses • Iatrogenic drug responses • Unpredictable adverse drug responses
	13.15 Discuss the prevention, recognition and management of adverse medication reactions.
	13.16 Discuss the prevention, recognition and management of medication interactions.
	13.17 Select the optimal medication and method of medication administration for patients with a particular clinical condition or situation.
14.0	**Medication Administration: Demonstrate** a complex depth, comprehensive breadth of knowledge of medication administration within the scope of practice of the paramedic. The student will be able to:
	14.01 Review the specific anatomy and physiology pertinent to medication administration.
	14.02 Discuss the paramedic's responsibilities and scope of practice pertinent to the administration of medications.
	14.03 Review mathematical principles and demonstrate equations necessary for performing drug calculations. ***include resources for safe administration of weight-based dosing.***
	14.04 Describe the indications, contraindications, procedure, equipment and risks associated with peripheral intravenous or external jugular access.
	14.05 Describe the indications, equipment needed, technique used, precautions, and general principles of intraosseous needle placement and infusion.
	14.06 Describe complications that can occur as a result of IV therapy.
	14.07 Review ***medication cross-check procedure and*** the "six rights" of drug administration and correlate these with the principles of medication administration.
	14.08 Describe the use of standard precautions and body substance isolation (BSI) procedures when administering a medication.
	14.09 Prepare medications for administration from a variety of types of packaging, including vials, non-constituted vials, ampules, prefilled syringes, and packaging for intravenous solutions.
	14.10 Describe the role of medical direction in medication administration and describe the difference between direct orders (online) and standing orders (off-line).

	14.11 Describe the indications, equipment needed, techniques used, precautions, and general principles of administering medications by the following routes: • inhalation route • gastric tube • rectal route
	14.12 Differentiate among the different percutaneous routes of medication administration.
	14.13 Describe the purpose, equipment needed, techniques used, complications, and general principles for obtaining a blood sample.
	14.14 Obtain venous and capillary blood for testing and discuss blood chemistry and normal values.
	14.15 Demonstrate principles of medical asepsis in the administration of medications.
	14.16 Demonstrate the procedure for disposal of contaminated items and supplies.
	14.17 Demonstrate cannulation of peripheral, intravenous and/or external jugular veins.
	14.18 Demonstrate intraosseous access.
	14.19 Demonstrate administration of medications by the following routes: • Oral • Sublingual • Buccal • Auto-injector • Inhalation route • Intranasal route • Subcutaneous route • Intramuscular route • Intravenous route • Intraosseous route
15.0	**Emergency Medications: Demonstrate** a complex depth, comprehensive breadth of knowledge of emergency medications within the scope of practice for the paramedic. The student will be able to:
	15.01 Discuss medications acute and maintenance/chronic) used by the paramedic, including indications, name, effects, medication action, routes of administration, contraindications, dosages, adverse reactions, side effects, complications and interactions for the following: • Airway management • Respiratory • Cardiovascular • Neurologic conditions • Gastrointestinal • Miscellaneous medications • Pain management

16.0	**Airway Management: Demonstrate** a complex depth, comprehensive breadth of knowledge of airway management within the scope of practice of the paramedic, patients of all ages The student will be able to:
16.01	Explain the primary objective of airway maintenance. ***to include proper airway assessment and techniques of assuring a patient airway.***
16.02	Explain the differences in airway anatomy.
16.03	Define, identify and describe a tracheostomy, laryngectomy, stoma, and tracheostomy tube.
16.04	Describe the special considerations in airway management and ventilation for the pediatric patient.
16.05	Describe the indications, contraindications, advantages, disadvantages, complications and equipment for rapid sequence intubation with neuromuscular blockade.
16.06	Identify neuromuscular blocking drugs and other agents used in rapid sequence intubation.
16.07	Describe the indications, contraindications, advantages, disadvantages, complications and equipment for sedation during intubation.
16.08	Describe the indications, contraindications, advantages, disadvantages and complications for performing cricothyrotomy.
16.09	Demonstrate the procedure for percutaneous cricothyrotomy.
16.10	Review the function of the structures located in the upper and lower airway.
16.11	Demonstrate effective techniques of advanced airway management of the following: • Orotracheal, • Nasotracheal, • Subglottic, • Supraglottic, • Digital intubation
16.12	Describe and demonstrate methods of assessment for confirming correct placement of any airway device.
16.13	Describe the indications, contraindications, advantages, disadvantages, complications, equipment and technique for extubation.
17.0	**Respiration:** Demonstrate a complex depth, comprehensive breadth of knowledge of respiration within the scope of practice of the paramedic patients of all ages. The student will be able to:
17.01	List the concentration of gases that comprise atmospheric air.
17.02	Describe the measurement of oxygen in the blood.
17.03	Describe the measurement of carbon dioxide in the blood.
17.04	Describe peak expiratory flow.

	17.05 Describe factors that cause decreased oxygen concentrations in the blood.
	17.06 Describe the factors that increase and decrease carbon dioxide production in the body.
	17.07 Define pulsus paradoxus.
	17.08 Describe the indications, contraindications, advantages, disadvantages, complications, liter flow range, and concentration of delivered oxygen for supplemental oxygen delivery devices.
	17.09 Review the anatomy, physiology and pathophysiology of ventilation and respiration to include • Pulmonary ventilation • Oxygenation • Respiration • External • Internal • Cellular
	17.10 Discuss assessment and management of adequate and inadequate respiration to include, Supplemental oxygen therapy
18.0	**Ventilation:** Demonstrate a complex breadth, comprehensive breadth of knowledge of ventilatory assessment and management, patients of all ages. The student will be able to:
	18.01 Perform and interpret pulse oximetry and capnography.
	18.02 Describe indications, contraindications, advantages, disadvantages, complications, and technique for ventilating a patient with an automatic transport ventilator (ATV), BIPAP/CPAP, AND PEEP devices.
	18.03 Assessment and management of adequate and inadequate ventilation to include effect of ventilation on cardiac output.
19.0	**Scene Size-Up**: Demonstrate a complex depth, comprehensive breadth of knowledge of scene management. The student will be able to
	19.01 Describe common hazards found at the scene of a trauma and a medical patient.
	19.02 Discuss common mechanisms of injury/ nature of illness. ***(MOI/NOI)***.
	19.03 Explain the rationale for crew members to evaluate scene safety prior to entering.

	19.04 Demonstrate the scene-size-up to include: • Scene safety/situational awareness • Scene management • Impact of the environment on patient care • Addressing hazards • Violence • Need for additional or specialized resources • Standard precautions • Multiple patient situations
20.0	**Primary Assessment:** Demonstrate a complex depth, comprehensive breadth of knowledge of the primary assessment for all patient situations. The student will be able to:
	20.01 Summarize the elements of a general impression of the patient.
	20.02 Explain the reason for performing a primary assessment.
	20.03 Discuss and demonstrate methods of assessing levels of responsiveness using AVPU.
	20.04 Discuss and demonstrate methods of assessing the airway, patients of all ages.
	20.05 Describe and demonstrate methods used for assessing if a patient is breathing, patients of all ages.
	20.06 Differentiate between a patient with adequate and inadequate breathing.
	20.07 Describe and demonstrate the methods used to obtain a pulse, patients of all ages.
	20.08 Discuss and demonstrate assessing the patient for external bleeding.
	20.09 Describe and demonstrate the assessment and interruption of skin color, temperature, moisture, and capillary refill patients of all ages.
	20.10 Explain the reasons for prioritizing a patient for care and transport.
	20.11 Describe when it is appropriate to expose the patient completely.
	20.12 Differentiate between critical, and non-life-threatening patient presentations. *and integration of treatment/procedures needed to preserve life.*
21.0	**History Taking:** Demonstrate a complex depth, comprehensive breath of knowledge of the components of history taking. The student will be able to:
	21.01 Determine and investigate the chief complaint. ***(i.e., MOI, NOI).***
	21.02 Describe the components of the patient history.
	21.03 Explain the importance of obtaining a SAMPLE and OPQRST history.

	21.04 Acknowledge the feelings patients experience during assessment.
	21.05 Discuss the value of obtaining a family and social history.
	21.06 Describe examples of different techniques (***i.e., therapeutic communication and adaptive interview techniques)*** the paramedic may use to obtain information from patients, family, or bystanders during the history taking process.
22.0	**Secondary Assessment::** Demonstrate a complex depth, comprehensive breadth of knowledge of techniques used for secondary assessment patients of all ages. The student will be able to:
	22.01 Review EMT standards and benchmarks for secondary assessment. (***i.e., assessment of vital signs, pain, techniques of physical exam).***
	22.02 Describe the techniques of inspection, palpation, percussion, and auscultation.
	22.03 Discuss the limitations of conducting a physical exam in the out-of-hospital environment.
	22.04 Demonstrate the examination of the patient including all major body systems and anatomical regions.
	22.05 Distinguish the importance of abnormal assessment findings in all the major body systems and anatomical regions.
	22.06 Describe the evaluation of patient's perfusion status based on findings in the initial assessment.
	22.07 State the reasons for performing a rapid trauma assessment.
	22.08 Discuss the reason for performing a focused history and physical exam.
	22.09 Discuss appropriate gender and cultural considerations regarding assessment.
	22.10 Discuss medical identification devices/ systems.
23.0	**Monitoring Devices:** Demonstrate a fundamental depth, foundational breadth of knowledge of monitoring devices within the scope of practice of the paramedic. The student will be able to:
	23.01 Describe the purpose, indications, procedure, normal findings, and limitations of the following patient monitoring technologies, including but not limited to: • Continuous ECG monitoring • 12-Lead ECG • EtCO2 capnography (wave form) • Methemoglobin monitoring • Total hemoglobin • Basic blood chemistry • Ultrasound • Other devices identified at the EMT level

	23.02 Demonstrate the use of the following patient monitoring technologies, including but not limited to: • Continuous ECG monitoring • 12-Lead ECG (i.e., acquisition, interpretation, and transmission). • Capnography (wave form) • Other devices identified at the EMT level
24.0	**Reassessment:** Demonstrate a complex depth, comprehensive breadth of knowledge of how and when to perform a reassessment for all patient situations. The student will be able to:
	24.01 Describe the components of reassessment and demonstrate the skills involved.
	24.02 Discuss the reasons for reassessment. ***of the patient***.
	24.03 Explain trending assessment components and its value to other health professionals who assume care of the patient.
	24.04 Demonstrate reassessment of patients, patients of all ages.
25.0	**Medical Overview: Demonstrate** a complex depth, comprehensive breadth of knowledge of pathophysiology, assessment, and management of medical complaints. The student will be able to:
	25.01 Identify factors that complicate patient assessment including: • Scene safety • Environmental factors • Chief complaint • Paramedic preconceptions • Distracting injuries • Tunnel vision • Patient cooperation • Paramedic attitude
	25.02 Discuss forming a field impression and utilizing available information to determine a different diagnosis.
	25.03 Discuss pathophysiology, assessment, and management of a medical complaints to include. • Transport mode • Destination decisions
26.0	**Neurology:** Demonstrate a complex depth, comprehensive breadth of knowledge of neurologic disorders/emergencies, patients of all ages. The student will be able to:
	26.01 Identify the risk factors associated with nervous system dysfunction.
	26.02 Review the anatomy and physiology of the organs and structures related to nervous system.

	26.03 Discuss the pathophysiology, signs and symptoms and demonstrate the assessment and management of patients with the following neurological conditions, including but not limited to: • Coma • Decreased level of responsiveness • Seizures • Syncope • Transient ischemic attack • Stroke and intracranial hemorrhage • Degenerative neurologic diseases (i.e., dementia, Alzheimer's and Parkinson's disease) • Chronic alcoholism • Back disorders • Headache • Brief Resolved Unexplained Event (BRUE) • Hydrocephalus – CSF diversion devices or shunts • Other neurological disorders to be determined locally
	26.04 Describe and differentiate the major types of seizures.
	26.05 Describe the types of stroke.
	26.06 Describe the significance of the prevalence of neurologic disorders in the United States.
	26.07 Discuss screen tools for assessment of stroke and large vessel occlusion.
	26.08 Demonstrate the use of stroke screening tools and appropriate decision-making regarding transport destination for a stroke patient.
27.0	**Abdominal and Gastrointestinal Disorders:** Demonstrate a complex depth, comprehensive breadth of knowledge of abdominal and gastrointestinal disorders/emergencies, patients of all ages. The student will be able to:
	27.01 Review the anatomy and physiology of the organs and structures related to gastrointestinal diseases.
	27.02 Differentiate between hemorrhagic and non-hemorrhagic causes of abdominal pain.
	27.03 Describe the technique for performing a comprehensive physical examination on a patient complaining of abdominal pain.

	27.04 Discuss the pathophysiology, signs, and symptoms, and demonstrate the assessment, and management of patients with the following abdominal and gastrointestinal disorders, including but not limited to: • Both upper and lower gastrointestinal bleeding • Acute gastroenteritis. • Colitis. • Diverticulitis. • Appendicitis. • Peptic ulcer disease. • Bowel obstruction. • Crohn's disease. • Pancreatitis. • Esophageal varices. • Hemorrhoids. • Cholecystitis. • Acute hepatitis
	27.05 Identify patients at risk for gastrointestinal emergencies.
	27.06 Demonstrate how to auscultate the abdomen to assess for diminished, absent or abnormal bowel sounds.
28.0	**Immunology:** Demonstrate a complex depth, comprehensive breadth of knowledge of immunology disorders/emergencies, patients of all ages. The student will be able to:
	28.01 Define and differentiate: • Allergic reaction. • Anaphylaxis • Antigens • Antibodies • Anaphylactoid reaction
	28.02 Review the anatomy and physiology of the organs and structures related to anaphylaxis.
	28.03 Describe the prevention of anaphylaxis and appropriate patient education.
	28.04 Review the pathophysiology of allergy and anaphylaxis.
	28.05 Describe the common methods of entry of allergens into the body.
	28.06 Review common antigens most frequently associated with anaphylaxis.
	28.07 Differentiate among the various treatment and pharmacological interventions used in the management of anaphylaxis and allergic reaction.
29.0	**Infectious Diseases:** Demonstrate a complex depth, comprehensive breadth of knowledge of assessment and management of a patient who may have an infectious disease, patients of all ages. The student will be able to:

	29.01 Review EMT standards and benchmarks for infectious disease.
	29.02 Review the specific anatomy and physiology pertinent to infectious and communicable diseases.
	29.03 Describe the steps of an infectious process.
	29.04 Describe and differentiate infectious agents, including bacteria, viruses, fungi, protozoans, and helminths (worms).
	29.05 Review characteristics of the immune system.
	29.06 Perform an assessment of a patient with an infectious/communicable disease.
	29.07 Effectively and safely manage a patient with an infectious/communicable disease.
	29.08 Review public health principles related to infectious disease.
	29.09 Review the roles of local, state, and federal agencies involved in infectious disease surveillance and outbreaks.
	29.10 Describe the interactions of the agent, host, and environment as determining factors in disease transmission.
	29.11 Describes the EMS professional's responsibilities as well as their rights under the Ryan White Act.
	29.12 Discuss the pathophysiology, signs, symptoms, assessment, and management and risk factors of significant health concerns.
	29.13 Discuss the characteristics of, and organisms associated with, febrile and afebrile respiratory disease.
	29.14 Describe the EMS provider's role in patient education and preventing disease transmission.
	29.15 Review the pathophysiology, risk factors, assessment, and prehospital management of sepsis/systemic inflammatory response syndrome (SIRS).
	29.16 Knowledge of: • Antibiotic resistance infections • Vaccine-preventable diseases • Emerging infectious disease
30.0	**Endocrine Disorders:** Demonstrate a complex depth, comprehensive breadth of knowledge in endocrine disorders/emergencies, patients of all ages. The student will be able to:
	30.01 Identify the risk factors related to disorders of the endocrine system.
	30.02 Review the anatomy and physiology of organs and structures related to endocrinologic diseases.

	30.03 Discuss the pathophysiology, signs and symptoms and demonstrate the assessment, and management of patients with the following endocrinologic emergencies: • Hypoglycemia • Hyperglycemia • Diabetic ketoacidosis • Cushing's syndrome • Adrenal insufficiency • Pituitary disorders • Thyroid disorders
31.0	**Psychiatric, Cognitive and Behavioral:** Demonstrate a complex depth, comprehensive breadth of knowledge regarding the assessment and management of psychiatric disorders, cognitive and behavioral emergencies, patients of all ages. The student will be able to:
	31.01 Differentiate among behavior, psychiatric disorders, and behavioral emergencies.
	31.02 Basic principles of the mental health system ▪ Patterns of violence, abuse, and neglect ▪ Suicide ideation ▪ Excited delirium ▪ Anxiety ▪ Depression ▪ Medical fear ▪ Substance use disorder/ addictive behavior. ▪ PTSD ▪ Acute psychosis ▪ Cognitive disorders ▪ Thought disorders (Mood disorders, Neurotic disorders, Somatoform disorders, Factitious disorders) ▪ Personality disorders
	31.03 Discuss the pathophysiology of common psychiatric disorders and behavioral emergencies.
	31.04 Discuss the general factors that may cause an alteration in a patient's behavior.
	31.05 Discuss the factors/signs or symptoms of various psychiatric emergencies to include suicide.
	31.06 Manage a behavioral emergency scenario applying knowledge of medical/legal Florida Statutes.
	31.07 Describe and demonstrate the assessment and management of the patient experiencing a behavioral or psychiatric emergency.
	31.08 Describe the biological, psychosocial, and sociocultural influences on psychiatric disorders.
	31.09 Describe the special considerations for the safety of the EMS provider, and EMS crew, the patient and bystanders when dealing with behavioral and psychiatric emergencies.
	31.10 Explain the importance of provider behavior and communication in the care of a patient with a behavioral emergency.

	31.11 Describe and demonstrate methods of restraint that may be used in the management of a patient with a behavioral emergency and possible legal implication.
	31.12 List the risk factors (including behaviors) for suicide.
32.0	**Cardiovascular:** Demonstrate a complex depth, comprehensive breadth of knowledge of cardiovascular disorders/emergencies, patients of all ages. The student will be able to:
	32.01 Describe the epidemiology, incidence, morbidity and mortality of cardiovascular disease.
	32.02 Identify the risk factors of coronary artery disease.
	32.03 Review the anatomy and physiology of the heart and circulatory system.
	32.04 Discuss the electrophysiology of the heart.
	32.05 Discuss and demonstrate ECG monitoring, 12 Lead placement, acquisition, and interpretation.
	32.06 Define and give examples of positive and negative inotropes, chronotropes and dromotropes.
	32.07 Identify the normal characteristics of the point of maximal impulse (PMI).
	32.08 Discuss the normal and abnormal heart sounds and how they relate to hemodynamic events in the cardiac cycle.
	32.09 Describe a systematic approach to the analysis and interpretation of cardiac dysrhythmias.
	32.10 Describe the conditions of pulseless electrical activity.
	32.11 Compare and contrast electrotherapy to include pacing.

32.12	Discuss the pathophysiology, signs and symptoms and demonstrate the assessment, and management of patients following conditions including the development of a treatment plan, including but not limited to: • Angina • Myocardial infarction STEMI/Non-STEMI • Congestive heart failure • Cardiac tamponade • Cardiogenic shock • Hypertension and acute hypertensive states • Cardiac arrest • Vascular disorders • Hypertrophic cardiomyopathies • Infectious diseases of the heart • Congenital abnormalities • Thromboembolism • Aortic aneurysm/dissection • LVAD • Heart Transplant
32.13	List other clinical conditions that may mimic signs and symptoms of coronary artery disease and angina pectoris.
32.14	Compare fibrinolysis from percutaneous intervention as reperfusion techniques used in patients with AMI or suspected AMI and describe the "window of opportunity" as it pertains to reperfusion of a myocardial infarction.
32.15	List the characteristics of a patient eligible for thrombolytic therapy.
32.16	Define the term acute pulmonary edema and describe its relationship to left ventricular failure.
32.17	Discuss preload, afterload and left ventricular end-diastolic pressure and relate each to the pathophysiology of heart failure.
32.18	Identify non-cardiac causes of cardiac arrest.
32.19	Discuss the components of post resuscitation care including how to determine the return of spontaneous circulation (ROSC).
32.20	Identify circumstances and situations where resuscitation efforts would not be initiated or would be terminated.
32.21	Conditions that predispose patients to cardiac rhythm disturbances including WPW, Brugada, long QT syndrome and others
33.0	**Toxicology:** Demonstrate a complex depth, comprehensive breadth of knowledge of the assessment and management of toxicology emergencies including psychosocial aspects of age-related assessment and treatment modifications for the major or common diseases and patients of all ages. The student will be able to:
33.01	Define and differentiate among toxicology, poisoning, and overdose.

33.02	Describe the pathophysiology and signs and symptoms of the following toxicological emergencies, including but not limited to: • Food poisoning • Carbon monoxide poisoning • Cyanide poisoning • Exposure to acid or alkaline substance • Exposure to hydrocarbons • Methanol ingestion • Isopropanol ingestion • Ethylene glycol ingestion • Exposure to poisonous substances • Drug withdrawal • Alcoholic syndrome • Withdrawal syndrome (including delirium tremens) • Illicit drug use • Medication overdose • Opioid overdose • Organophosphate overdose • Toxidromes • Cholinergic • Anticholinergic • Sympathomimetic • Sedative / hypnotics • Opioid • Corrosive • Knockdown
33.03	Discuss the role of the Poison Control Center with the nationwide contact number 800-222-1222 in the United States.
33.04	Review various ways that toxins enter the body.
33.05	Discuss and demonstrate the assessment and management for the patient with a toxicological emergency.
33.06	Explain the rationale for contacting medical direction early in the prehospital management of a patient with a toxicological emergency.

	33.07 Review the following for Narcan (naloxone): • Generic and trade names • Medication forms • Dose • Administration • Contraindications • Medications • Drugs of Abuse • Non-FDA approved medications and supplements • Serotonin Syndrome • Malignant Hyperthermia
34.0	**Respiratory:** Demonstrate a complex depth, comprehensive breadth of knowledge of the assessment and management of respiratory disorders, include psychosocial aspects of age-related assessment and treatment modifications for the major or common diseases and/ or emergencies associated emergencies, patients of all ages. The student will be able to
	34.01 Discuss the epidemiology, morbidity, and mortality of respiratory illness in the United States.
	34.02 Review hypoventilation and hyperventilation and outline the conditions with which they are often associated.
	34.03 Review the anatomy, physiology and functions of the respiratory system.
	34.04 Discuss those factors that contribute to the formation of a general impression and degree of respiratory distress.
	34.05 Identify breathing patterns that are associated with respiratory distress and neurologic insults and their correlation with the signs of increased work of breathing.
	34.06 Review between normal and abnormal breath/lung sounds and its physiologic significance.
	34.07 Explain the concepts of hypoxic drive and auto-PEEP as they relate to the COPD patient.

34.08 Discuss the pathophysiology, signs and symptoms and demonstrate the assessment, and management of patients with the following respiratory conditions, including but not limited to:

- Pulmonary infections (upper and lower airway)
- Atelectasis
- Anatomic or foreign body obstruction
- Aspiration
- Asthma
- Emphysema
- Chronic bronchitis
- Spontaneous pneumothorax
- Pleural effusion
- Pulmonary embolism
- Cancer
- Toxic inhalations
- Pulmonary edema
- Acute respiratory distress syndrome (ARDS)
- Pneumonia
- Neoplasms of the lung
- Hyperventilation syndrome
- Upper airway disease
- RSV
- Croup
- Epiglottitis
- COPD
- Broncho pulmonary dysplasia
- Respiratory Distress
- Respiratory Failure
- Respiratory Arrest

35.0 **Hematology:** Demonstrate a complex depth, foundational breadth of knowledge of the assessment, and management of hematology disorders/emergencies, patients of all ages. The student will be able to:

35.01 Identify the role of heredity in the risk for hematologic disorders.

35.02 Review the anatomy and physiology of the hematopoietic system.

35.03 Describe volume and volume-control related to the hematopoietic system.

35.04 Explain the significance of the hematocrit with respect to red cell size and number.

35.05 Explain the correlation of the RBC count, hematocrit and hemoglobin values.

	35.06 Recognize medications used to decrease the risk of thrombosis.
	35.07 Identify blood groups.
	35.08 Discuss the pathophysiology, signs and symptoms and demonstrate the assessment, and management of patients with the following conditions, including but not limited to: • Anemia • Leukemia • Lymphomas • Polycythemia • Disseminated intravascular coagulopathy • Hemophilia • Sickle cell disease • Multiple myeloma • Leukopenia/neutropenia • Leukocytosis • Thrombocytosis • Thrombocytopenia • Transfusion complications • Hemostatic disorders
36.0	**Genitourinary/Renal: Demonstrate** a complex depth, comprehensive breadth of knowledge of genitourinary and renal emergencies to include psychosocial aspects of age-related assessment and treatment modifications for the major or common diseases and/or emergencies, patients of all ages. The student will be able to:
	36.01 Describe the epidemiology, incidence, morbidity, mortality, and risk factors of urological emergencies.
	36.02 Review the anatomy and physiology of the organs and structures related to urogenital diseases.
	36.03 Discuss referred pain and visceral pain as it relates to urology.

	36.04 Discuss the pathophysiology, signs and symptoms and demonstrate the assessment, and management of patients of the following urologic and renal conditions, including but not limited to: • Acute renal failure • Chronic renal failure • Complications related to hemodialysis and peritoneal dialysis. • Renal calculi • Priapism • Testicular torsion • Urinary tract infection • Complications related to urinary catheter management (not insertion) • Sexual assault (female and male) • Infection • Male genital tract conditions
	36.05 Review fluids, electrolytes, and acid-based disturbances.
37.0	**Gynecology:** Demonstrate a complex depth, comprehensive breadth of knowledge of the assessment findings and the management of gynecology disorders Include psychosocial aspects of age-related assessment and treatment modifications for the major or common diseases and/or /emergencies, patients of all ages. The student will be able to:
	37.01 Review anatomy and physiology of the female reproductive system.
	37.02 Identify the normal events of the menstrual and ovarian cycle.
	37.03 Discuss the pathophysiology, signs and symptoms and demonstrate the assessment, and management of patients with specific gynecological emergencies, including but not limited to: • Infection (including pelvic inflammatory disease, Bartholin's abscess, and vaginitis/ vulvovaginitis) • Ovarian cyst and ruptured ovarian cyst • Ovarian torsion • Endometriosis • Dysfunctional uterine bleeding • Prolapsed uterus • Vaginal foreign body • Vaginal hemorrhage
	37.04 Describe the importance of maintaining a patient's modesty and privacy while still being able to obtain necessary information.
	37.05 Discuss the need to provide care for a patient of sexual assault, while still preventing destruction of crime scene information.
38.0	**Non-Traumatic Musculoskeletal Disorders:** Demonstrate a fundamental depth, foundation breadth of knowledge of the assessment and management of non-traumatic fractures, patients of all ages. The student will be able to:
	38.01 Review the anatomy and physiology of the musculoskeletal system

	38.02 Discuss the pathophysiology, signs and symptoms and demonstrate the assessment and management of patients with musculoskeletal emergencies, including but not limited to: • Osteomyelitis and tumors • Disc disorders, lower back pain (cauda equine syndrome, sprain, and strain.) • Joint abnormalities • Muscle abnormalities • Overuse syndrome • Soft tissue infections • Non-traumatic fractures • Disorders of the spine • Rhabdomyolysis
39.0	**Diseases of the Eyes, Ears, Nose, and Throat:** Demonstrate a fundamental depth, foundational breadth of knowledge of the assessment and management of common or major diseases of the eyes, ears, nose and throat, patients of all ages. The student will be able to:
	39.01 Review the anatomy and physiology of the eyes, ears, nose, and throat.
	39.02 Discuss the pathophysiology, signs, and symptoms and demonstrate the assessment and management of patients with various eye diseases/injuries, including but not limited to: • Burns of eye and adnexa • Conjunctivitis • Corneal abrasions • Foreign body • Inflammation of the eyelid • Glaucoma • Hyphemia • Iritis • Papilledema • Retinal detachment and defect • Cellulitis of orbit
	39.03 Discuss the pathophysiology, signs, and symptoms and demonstrate the assessment and management of patients with various ear diseases/injuries including: • Foreign body • Impacted cerumen • Labyrinthitis • Meniere's disease • Otitis external and media • Perforated tympanic membrane

	39.04 Discuss the pathophysiology, signs, and symptoms and demonstrate the assessment and management of patients with various nose diseases/injuries including: • Epistaxis • Foreign body intrusion • Rhinitis • Sinusitis
	39.05 Discuss the pathophysiology, signs and symptoms and demonstrate the assessment and management of patients with oropharynx/throat diseases/injuries including: • Dentalgia and dental abscess • Diseases of oral soft tissue/ Ludwig's angina • Foreign body intrusion • Epiglottitis • Laryngitis • Tracheitis • Oral candidiasis • Peritonsillar abscess • Pharyngitis/tonsillitis • Temporomandibular joint disorders
40.0	**Shock:** Demonstrate the integration of a comprehensive knowledge of causes and pathophysiology into the management of shock (Include psychosocial aspects of age- related assessment and treatment modifications for pediatric and geriatric patients). The student will be able to:
	40.01 Essential components in normal perfusion and Physiologic response
	40.02 Define and differentiate between compensated and decompensated shock for all types of shock.
	40.03 Review the pathophysiology and demonstrate the assessment and management of the types of shock • Distributive, Neurogenic, Psychogenic, Hemorrhagic, and Obstructive
	40.04 Describe the epidemiology, including premorbid and comorbid conditions and prevention strategies, for shock and hemorrhage.
	40.05 Review the anatomy and physiology of the cardiovascular and respiratory systems.
	40.06 Contrast the physiology of blood flow during normal states, peri-arrest, cardiac arrest and shock.
	40.07 Discuss and demonstrate the assessment and management of shock.
	40.08 Review the management of hemorrhage. • Discuss and demonstrate the assessment and management of internal hemorrhage • Discuss and demonstrate the assessment and management of external hemorrhage • Review the stages and classifications of hemorrhage
	40.09 Circulatory assist devices

	40.10 Discuss appropriate fluid management.
	40.11 Describe the effects of decreased perfusion at the capillary level.
	40.12 Relate pulse pressure changes to perfusion status.
	40.13 Relate orthostatic vital sign changes to perfusion status.
	40.14 Discuss and differentiate the physiological manifestations of shock, patients of all ages.
41.0	**Resuscitation from Cardiac Arrest:** Demonstrate the integration of a comprehensive knowledge of causes and pathophysiology into the management of cardiac arrest and respiratory failure (Include psychosocial aspects of age- related assessment and treatment modifications for pediatric and geriatric patients). The student will be able to:
	41.01 Review the following for the cardiac arrest victim: • Epidemiology • CPR Pathophysiology • Physiology of blood flow during external chest compressions • Resuscitation success/research • Ethical issues in resuscitation
	41.02 Describe the epidemiology, including premorbid and comorbid conditions and prevention strategies, for Cardiac Arrest • Termination of resuscitation
	41.03 Review defibrillation and cardioversion to include manual techniques, automatic and semi-automated devices.
	41.04 Discuss causes, pathophysiology, signs, and symptoms and management of special arrest and peri-arrest conditions, including but not limited to: • Electrolyte disorders • Toxic exposures • Drowning • Hypothermia • Near-Fatal Asthma • Anaphylaxis • Trauma • Pregnancy • Electrical shock and lightning strikes
	41.05 Review post resuscitative care include, temperature regulation, glucose/electrolyte management
42.0	**Trauma Overview:** Demonstrate a complex depth, comprehensive breadth of knowledge of pathophysiology, assessment, and management of trauma patients, patients of all ages. The student will be able to:
	42.01 Review the pathophysiology of the trauma patient.

	42.02 Review the components of comprehensive trauma systems and levels of trauma centers.
	42.03 Review the considerations for different transportation modes to a trauma center.
	42.04 Discuss the kinematics of blunt and penetrating trauma.
	42.05 Discus and describe significant and non-significant mechanism of injury (MOI) and provide examples of each.
	42.06 Discuss and demonstrate the application of State of Florida's trauma scorecard methodologies as required in Florida Statute and Florida Administrative Code.
	42.07 Review the National Trauma Triage Protocol of Injured Patients.
	42.08 Review forming a field impression and utilizing available information to determine a differential diagnosis.
	42.09 Review the need for rapid intervention transport of the trauma patient.
43.0	**Bleeding:** Demonstrate a complex depth, comprehension breadth of knowledge of pathophysiology, assessment and management of bleeding patients of all ages. The student will be able to:
	43.01 Review the compensatory mechanism in hemorrhagic shock.
	43.02 Review the administration of medications to assist in the maintenance of homeostasis.
	43.03 Review the maintenance of tissue oxygenation in a bleeding patient.
	43.04 Discuss appropriate fluid resuscitation for the patient in hemorrhagic shock.
	43.05 Review the different methods/modalities of controlling bleeding.
44.0	**Chest Trauma:** Demonstrate a complex depth, comprehensive breadth of knowledge of pathophysiology, assessment, and management of chest trauma, patients of all ages. The student will be able to:
	44.01 Review the anatomy and physiology of the organs and structures related to thoracic injuries. • Blunt vs Penetrating Mechanisms

	44.02 Review the pathophysiology, signs and symptoms and mechanism of injury (MOI) of the following injuries, including but not limited to:
	• myocardial injuries
	  ○ pericardial tamponade
	  ○ myocardial contusion
	  ○ myocardial rupture
	• Vascular injury
	  ○ aortic dissection
	  ○ pulmonary contusion
	• Hemothorax
	• Pneumothorax
	• Hemopneumothorax
	• Cardiac Tamponade
	• Commotio cordis
	• Tracheobronchial disruption
	• Diaphragmatic rupture and injury
	• Traumatic asphyxia
	• Rib fracture
	• Flail segment
	• Sternal fracture
	• Vascular injuries
	• Impaled objects
	• Evisceration/shock

	44.03 Discuss monitoring of chest tubes.
	44.04 Demonstrate the following techniques of management for thoracic injuries: needle decompression, elective intubation, ECG monitoring. oxygenation, and ventilation
45.0	**Abdominal and Genitourinary Trauma:** Demonstrate a complex depth, comprehensive breadth of knowledge of pathophysiology, assessment, and management of abdominal and genitourinary trauma, patients of all ages. The student will be able to:
	45.01 Review the anatomy and physiology of organs and structures related to abdominal injuries.
	45.02 Describe the mechanism of injury for and types of open and closed abdominal and retroperitoneal injuries involving seat belts, penetrating, blunt and evisceration.

	45.03 Describe and demonstrate the pathophysiology, signs and symptoms and the assessment and management for, including but not limited to: • Pelvic fractures. • Solid organ injuries • Hollow organ injuries • Abdominal vascular injuries • Retroperitoneal space (kidneys) • Genitourinary system
	45.04 Review the psychological considerations associated with genitourinary injuries.
46.0	**Orthopedic Trauma:** Demonstrate a fundamental depth, foundational breadth of knowledge of pathophysiology, assessment, and management of orthopedic trauma patients of all ages. (Include psychosocial aspects of age- related assessment and treatment modifications for pediatric and geriatric patients). The student will be able to:
	46.01 Review the anatomy and physiology of the musculoskeletal system, include the healing process.
	46.02 Discuss pathophysiology, signs and symptoms, and MOI for orthopedic trauma.
	46.03 Define the different types of orthopedic trauma including fracture classifications. • Upper Vs Lower • Open/Closed Fractures • Pelvic • Dislocations • Sprains • Strains
	46.04 List the 6 “P” orthopedic injury assessment. • Pain • Paresthesia • Poikilothermia • Pallor • Paralysis • Pulselessness
	46.05 Discuss the following management techniques: • Heat therapy • Cold therapy • Splinting
	46.06 Describe and demonstrate the assessment and management of a patient with a suspected orthopedic trauma including medication administration (analgesics and anxiolytics).
	46.07 Discuss the need for assessment of distal pulses, motor, and sensation before and after splinting.

	46.08 Define Luxation and Subluxation.
	46.09 Explain the rationale for splinting at the scene versus load and go.
	46.10 Demonstrate the proper use various splinting materials and devices to include improvised and traction splints.
	46.11 Discuss and demonstrate the assessment and management of compartment and crush syndrome: • Destination decision • Rhabdomyolysis
	46.12 Discuss the pathophysiology and demonstrate the assessment and management of a tendon injury to the knee (patellar), shoulder, and Achilles.
	46.13 Discuss the proper procedure to package an amputated body part for replantation.
47.0	**Tissue Trauma:** Demonstrate a complex depth, comprehensive breadth of knowledge of pathophysiology, assessment, and soft management of soft tissue trauma, patients of all ages. The student will be able to:
	47.01 Review anatomy and physiology and identify the major functions of the integumentary system.
	47.02 Discuss the pathophysiology of soft tissue injuries and the healing process including: • Inflammation • Epithelialization • Neovascularization • Collagen Synthesis • Alterations in would healing • Abnormal scar formation
	47.03 Describe and demonstrate the assessment and management of various soft tissue injuries. • Wounds (avulsion, bite, laceration, puncture, incision) • Crush/compartment syndrome • High-pressure injection injury
	47.04 Identify types of burn injuries including: • Thermal burn • Chemical burn • Electrical burn • Radiation burn
	47.05 Describe the depth classification of burn injuries including: • Superficial burn • Partial-thickness burn • Full-thickness burn • Other depth classification
	47.06 Describe and demonstrate methods for determining body surface area percentage of a burn injury including the “rule of nines”, the “rule of palms”, and other methods.

	47.07 Explain how the seriousness of a burn is related to its depth and percentage of body surface area (BSA) involved.
	47.08 Review the various management techniques for hemorrhage control.
	47.09 Differentiate among the types of injuries requiring the use of occlusive versus non-occlusive dressing.
	47.10 Demonstrate the proper use of any Morgan□ type lens for irrigation of the eye. • Thermal • Inhalation • Chemical • Electrical • Radiation
	47.11 Describe the pathophysiologic complications and systemic complications of a burn injury.
	47.12 Discuss comorbidities in burn patients.
	47.13 Describe the management of a burn injury, including airway and ventilation, circulation, pharmacological, non-pharmacological, transport considerations, psychological support/communication strategies, and other management.
	47.14 Describe the types of chemicals and their burning processes and a chemical burn injury to the eye.
	47.15 Discuss appropriate fluid resuscitation for burn patients.
48.0	**Head, Face, Neck, and Spine:** Demonstrate a fundamental depth, foundational breadth of knowledge of head, face, neck, and spine trauma, patients of all ages. The student will be able to:
	48.01 Discuss types of and potential complications of facial injuries.
	48.02 Discuss pathophysiology, signs and symptoms, assessment and management, and a field impression for injuries to the following areas: • Eye(s) • Nose • Throat/neck • Face • Mouth • Ear(s)
	48.03 Distinguish between an open and closed head injury.
	48.04 Define and explain the process involved with increasing ICP.
	48.05 Describe and demonstrate the assessment and general management of the head/ brain injury patient, including pharmacological and non-pharmacological treatment.

	48.06 Discuss the pathophysiology, signs and symptoms, and assessment and management for a patient for each of the following conditions: • Skull fracture • Cerebral contusion • Intracranial hemorrhage • Epidural, subdural, intracerebral, and subarachnoid • Perforated tympanic membranes • Orbital fracture / Globe rupture • Severe Epistaxis • Mandibular fracture • Dental fracture • Facial / Unstable Facial fracture • Penetrating neck trauma • Spine trauma • Shaken baby syndrome. • Laryngotracheal injuries
	48.07 Review various methods for stabilization and removal of a helmet.
49.0	**Nervous System Trauma:** Demonstrate a fundamental depth, foundational breadth of knowledge of nervous system trauma, patients of all ages. The student will be able to:
	49.01 Review the anatomy and physiology of the central nervous system, brain, spinal cord, skull and spinal column.
	49.02 Discuss pathophysiology, signs and symptoms, assessment, and management of the following nervous system injury including: • Cauda Equine syndrome • peripheral nerve injuries • intracerebral hemorrhage • cranial fractures • brain tissue injuries • spinal cord injuries • Brown-Sequard Syndrome • anterior cord syndrome • central cord syndrome • spinal shock
	49.03 Discuss the mechanism of injury which would result in a nervous system injury.
	49.04 Review the rationale for and potential for motion restriction for the entire spine when a cervical spine injury is suspected.
	49.05 Discuss the research involving the management of nervous system injuries and patient management.

50.0	**Special Considerations in Trauma:** Demonstrate a complex depth, comprehensive breadth of knowledge of special considerations in trauma, patients of all ages. The student will be able to:
	50.01 Integrate the assessment and management differences associated with the following special populations: • Pregnancy • Pediatric • Geriatric • Cognitively impaired patient
51.0	**Environmental Emergencies:** Demonstrate a complex depth, comprehensive breadth of knowledge of environmental emergencies, patients of all ages. The student will be able to:
	51.01 Discuss the pathophysiology, signs and symptoms, assessment and management and MOI of the following: • Drowning and water related incidents • Temperature-related illness • Bites and envenomation • Diving injuries • Lightning (electrical) injury • High altitude illness
	51.02 Identify environmental factors that may cause illness, exacerbate preexisting illness and complicate treatment or transport decisions.
	51.03 Review several methods of temperature monitoring.
	51.04 Describe the general process of thermal regulation, including substances used and wastes generated.
	51.05 Define fever and discuss its pathophysiologic mechanism.
	51.06 Discuss the role of fluid therapy in the treatment of temperature related emergencies.
	51.07 Review the gas laws related to the pathophysiology of injury in a submersion emergency.
	51.08 Describe the function of the Divers Alert Network (DAN) and how its members may aid in the management of diving-related illnesses.
	51.09 Differentiate among the various treatments and interventions for the management of diving accidents.
	51.10 Describe the specific function and benefit of hyperbaric oxygen therapy for the management of diving accidents.
52.0	**Multi-Systems Trauma:** Demonstrate a complex depth, comprehensive breadth of knowledge of multi-system trauma and blast injuries. The student will be able to:
	52.01 Review the priority of care in the multisystem trauma patient.
	52.02 Identify and Explain Blast Injuries
	52.03 Explain which ALS interventions should occur prior to a transport decision and during transport.

53.0	**Obstetrics:** Demonstrate a complex depth, comprehensive breadth of knowledge of the management of the obstetric patient within the scope of practice of the paramedic. The student will be able to:
	53.01 Review the anatomy and physiology of the reproductive system.
	53.02 Define the stages of labor and discuss how to assess them.
	53.03 Assessment of the pregnant patient
	53.04 Differentiate between cephalic and abnormal delivery.
	53.05 Vaginal bleeding in the pregnant patient
	53.06 Normal Delivery
	53.07 Describe the management of a patient with pre-delivery emergencies.
	53.08 Discuss and demonstrate the patient care for all stages of labor in a cephalic delivery for the mother and the newborn.
	53.09 Describe the procedures for handling complications of delivery.
	53.10 Describe the management of the mother post-delivery. o Demonstrate the procedures for handling complications of pregnancy including per-eclampsia and high risk. • Ectopic pregnancy • Abnormal delivery (nuchal cord, prolapsed cord, breech, shoulder dystocia, prematurity, multiparity) o Third trimester and antepartum bleeding • (Placenta previa. placental abruption) o Pathophysiology of complications of pregnancy o Spontaneous abortion/miscarriage o Complications of labor (fetal distress, premature rupture of membranes, rupture of uterus) o Hyperemesis gravidarum
	53.11 Describe the management of the mother post-delivery.
	53.12 Discuss and demonstrate the patient care measures for all stages of labor in abnormal deliveries for the mother and the newborn.
	53.13 Describe special considerations when meconium is present in amniotic fluid or during delivery.
54.0	**Neonatal Care:** Demonstrate a complex depth, comprehensive breadth of knowledge of the management of the neonatal patient within the scope of practice of the paramedic. The student will be able to:
	54.01 Review the term neonate.
	54.02 Identify antepartum and intrapartum factors that can affect the neonate.
	54.03 Discuss pulmonary perfusion and asphyxia.

54.04	Calculate the Apgar score given various neonate situations.
54.05	Review resuscitation equipment and procedures for the neonate
54.06	Newborn stabilization
54.07	Neonatal resuscitation
54.08	Anatomy and physiology of neonatal circulation
54.09	Determine when an orogastric tube should be inserted during positive-pressure ventilation.
54.10	Discuss the pathophysiology, signs and symptoms, assessment and management of the following, including but not limited to: • Apnea • Bradycardia • Acidosis • Pneumothorax • Meconium-stained • Low blood volume • Dysphemistic hernia • Respiratory distress • Respiratory depression secondary to narcotics • Low birth weight • Seizures • Hypoglycemia • Diarrhea • Jaundice • Fever • Hypothermia • Birth injuries • Cardiac conditions
54.11	Discuss post arrest management of the neonate.
54.12	Discuss vascular access cannulation techniques for a newborn including umbilical vein/artery access.
55.0	**Pediatrics:** Demonstrate a complex depth, comprehensive breadth of knowledge of the management of the pediatric patient within the scope of practice of the paramedic. The student will be able to:
55.01	Discuss key anatomical, physiological, and developmental characteristics of infants and children and their implications.
55.02	Review and demonstrate techniques for successful assessment and treatment of infants and children.

	55.03 Review airway and ventilatory considerations and procedures for pediatric patients.
	55.04 Discuss the indications and methods for gastric decompression for infants and children.
	55.05 Discuss the pathophysiology, signs and symptoms, assessment and management of the following, including but not limited to: • Altered level of consciousness • Trauma • Hypo-profusion • Respiratory distress/failure • Cardiac dysrhythmia • Neurological emergency • Abuse/neglect • SUIDS • FABO • Respiratory emergencies • Congenital heart disease • Hydrocephalus/VP shunts
	55.06 Discuss the appropriate procedure and equipment for vascular and intraosseous access.
	55.07 Review basic cardiac life support (CPR) guidelines for infants and children.
	55.08 Integrate advanced life support skills with basic cardiac life support for infants and children.
	55.09 Discuss the indications, dosage, route of administration and special considerations for medication administration in infants and children.
	55.10 Describe Sudden Unexplained Infant Death Syndrome (SUIDS), current theories, assessment and management, and the immediate needs of the family.
	55.11 Discuss the parent/caregiver responses to the death of an infant or child.
	55.12 Discuss and demonstrate the use of a length-based resuscitation tape and other methods for determining equipment sizes, drug doses, and other pertinent information for a pediatric patient.
	55.13 Discuss proper placement of a gastric tube in infants and children.
	55.14 Review appropriate routes and techniques for medication administration.
	55.15 Demonstrate appropriate parent/caregiver interviewing techniques for infant and child death situations.
56.0	**Geriatrics:** Demonstrate a complex depth, comprehensive breadth of knowledge of the management of the geriatric patient within the scope of practice of the paramedic. The student will be able to:
	56.01 Review and discuss the term geriatrics

	56.02 Review the anatomy, physiology, and pathophysiology of the geriatric patient.
	56.03 Discuss common emotional and psychological concerns and conditions of the geriatric patient.
	56.04 Discuss the importance of fall prevention with the geriatric patient.
	56.05 Describe principles that should be employed when assessing and communicating with the geriatric patient.
	56.06 Describe the common causes, assessment and management of the geriatric patient with a medical, trauma, or psychosocial complaint.
	56.07 Discuss the impact of polypharmacy and medication non-compliance on patient assessment and management.
	56.08 Discuss medication issues of the elderly including polypharmacy, dosing errors and increased drug sensitivity and toxicology.
57.0	**Patients with Special Challenges:** Demonstrate a complex depth, comprehensive breadth of knowledge of management of the patient with special challenges within the scope of practice of the paramedic, patients of all ages. The student will be able to:
	57.01 Discuss the special considerations required when providing emergency care to patients with: • Abuse/neglect of vulnerable populations • Homelessness • Poverty • Bariatrics • Tech dependent • Technology dependent (vagal nerve stimulators, CSF diversion devices or shunts, VAD, pacemakers, gastric tubes and others to be locally determined) • Hospice/terminally ill • Tracheostomy • Home care • Sensory deficit/loss • Developmental disability • Autism Spectrum Disorder • Orthotics/prosthetics
	57.02 Discuss special considerations regarding common medical devices used in the home care of patients with special challenges including: • Respiratory devices • Cardiac devices • Gastro-urinary devices • Central & peripheral IV catheters
	57.03 Describe home care and the types of patients it serves and the services it encompasses.

57.04	Describe the characteristics associated with the profile of the typical abuser of: • Domestic abuser • Elder abuser • Child abuser
57.05	Discuss the role of the Paramedic as a patient advocate for vulnerable populations.
57.06	Differentiate between hospice/palliative care and curative care.
57.07	Describe paraplegia/quadriplegia.
57.08	Describe the various etiologies of mental illness.
57.09	Recognize the presenting signs of the following: • Autism spectrum • Developmental disability • Down's syndrome
57.10	Describe the following diseases/illnesses and identify each of their possible presenting signs, including but not limited to: • Arthritis • Cancer • Cerebral palsy • Cystic fibrosis • Multiple sclerosis • Muscular dystrophy • Myasthenia gravis • Poliomyelitis • Spina bifida, • Patients with a previous head injury • Mental illness
57.11	Review hospice care, comfort care and DNR/DNAR as they relate to local practice, law and policy.
57.12	Describe the access and discuss indwelling catheters, implanted central IV ports and central line monitoring.
57.13	Describe complications of assessing each of the airway, vascular access, and GI/GU devices.
57.14	Identify and describe the failure of wound drains.
57.15	Review the rights of the terminally ill.
57.16	Demonstrate proper tracheotomy care.
57.17	Demonstrate the insertion of a new inner cannula and/or the use of an endotracheal tube to temporarily maintain an airway in a tracheostomy patient.

58.0	**Principles of Safely Operating a Ground Ambulance:** Demonstrate a simple depth, foundational breadth of knowledge of risks and responsibilities of transport. The student will be able to:
	58.01 Review the EMT standards and benchmarks for the Principles of Safely Operating a Ground Ambulance.
	58.02 Risks and responsibilities of emergency response and radio communications.
	58.03 Risks and responsibilities of operating emergency vehicles
	58.04 Pediatric transport considerations
	58.05 Risks and responsibilities of transport
59.0	**Incident Management:** Demonstrate a complex depth, comprehensive breadth of knowledge of establishing and working within the incident management system. The student will be able to:
	59.01 Review the EMT standards and benchmarks for Incident Management and apply a complex depth and comprehensive breadth of establishing and working within the incident management system.
60.0	**Multiple Casualty Incidents:** Demonstrate a simple depth, foundational breadth of knowledge of responding to an emergency during a multiple casualty incident. The student will be able to:
	60.01 Review the EMT standards and benchmarks for Multiple Casualty Incidents.
	60.02 Establish and work within the incident management system.
	60.03 Understand the principles of Crew Resource Management
61.0	**Air Medical:** Demonstrate a complex depth, comprehensive breadth of knowledge of air medical transport risks, needs and advantages. The student will be able to:
	61.01 Describe the advantages and disadvantages of air medical transport.
	61.02 Safe air medical operations
	61.03 Identify appropriate reasons for the use of air medical for emergency patient transport.
	61.04 Describe the risks involved with the use of air medical transport.
	61.05 Criteria for utilizing air medical response
	61.06 Demonstrate the actions needed to ensure effective and safe ground operations involving air medical response.
	61.07 Demonstrate appropriate communication of information needed for safe and effective interaction between the air medical crew and ground personnel.
	61.08 Medical risks/needs/advantages
62.0	**Vehicle Extrication:** Demonstrate a simple depth, simple breadth of knowledge for safe vehicle extrication and use of simple hand tools. The student will be able to:

	62.01 Review the EMT standards and benchmarks for Vehicle Extrication.
	62.02 Safety principles of rescue operations
63.0	**Hazardous Materials Awareness:** Demonstrate a simple depth, simple breadth of knowledge of risks and responsibilities of operating in a cold zone at a hazardous material or other special incident. The student will be able to:
	63.01 Review the EMT standards and benchmarks for Hazardous Materials Awareness.
	63.02 Risks and responsibilities of operating on the scene of a hazardous materials incident
64.0	**Mass Casualty Incidents due to Terrorism and Disasters:** Demonstrate a simple depth, simple breadth of knowledge of risks and responsibilities of operating on the scene of a natural or man- made disaster. The student will be able to:
	64.01 Review the EMT standards and benchmarks for Mass Casualty Incidents.
	64.02 Risks and responsibilities of operating on the scene of a natural or man-made disaster.
	64.03 Operational goals.
	64.04 Field triage.
	64.05 Destination determination.
	64.06 Treatment principles.

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as, experimental, quality, and safety procedures are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate and troubleshoot equipment/tools used to make observations. Students understand measurement error; and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

Special Notes

The Paramedic standards and benchmarks in this framework include all of the content, knowledge and skills at the EMT level in addition to the Paramedic objectives. For those standards that state "Review EMT Objectives." Please refer to the EMT curriculum framework for specific objectives.

Career and Technical Student Organization (CTSO)

CTSOs are co-curricular career and technical student organizations providing leadership training and reinforcing specific career and technical skills. Career and Technical Student Organizations provide activities for students as an integral part of the instruction offered. Other CTSOs not listed in this curriculum framework or recognized by the Florida Department of Education are permissible provided they support student mastery over the standards and benchmarks of this curriculum framework.

Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

Florida Department of Education
Curriculum Framework

Program Title: **Emergency Medical Technician**
Program Type: **ATD (Applied Technology Diploma)**
Career Cluster: **Health Science**

	College Credit	Clock Hour
Program Number	N/A	W170212
CIP Number	0351090408	0351090413
Grade Level	Applied Technology Diploma (ATD)	30, 31
Program Length	12 credit hours	300 clock hours
CTSO	HOSA	HOSA
SOC Codes (all applicable)	For program SOC codes, please see the Program and Course Tables section of the CTE Program Resources page linked below.	
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml	
Basic Skills Level:	N/A	N/A

Purpose

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Health Science career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of Health Science career cluster.

This is an instructional program that prepares students for employment as emergency medical technicians (Emergency Medical Technicians and Paramedics) to function at the basic pre-hospital emergency medical technician level and treat various medical/trauma conditions using appropriate equipment and materials. The program prepares students for certification as EMT's in accordance with Chapter 64J of the Florida Administrative Code. The program must be approved by the Department of Health, Office of Emergency Medical Services, and the curriculum must adhere to the US Department of Transportation (DOT) National EMS Education Standards for EMT. This is the initial level for a career in emergency medical services and the primary prerequisite for paramedic training and certification.

The content includes but is not limited to patient assessment, airway management, cardiac arrest, external and internal bleeding and shock, traumatic injuries, fractures, dislocations, sprains, poisoning, heart attack, stroke, diabetes, acute abdomen, communicable diseases, patients with

abnormal behavior, alcohol and drug abuse, the unconscious state, emergency childbirth, burns, environmental hazards, communications, reporting, extrication and transportation of patient. The student must be proficient in patient assessment and evaluation, the use of suctioning devices, oral and nasal airways, resuscitation devices, oxygen equipment, sphygmomanometer and stethoscope, splints of all types, pneumatic anti-shock garments, extrication tools, dressings and bandages, stretchers and patient carrying devices.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Program Structure

This program is an Applied Technology Diploma (ATD) program that is part of a technical degree program, is less than 60 credit hours, and leads to employment in a specific occupation. An ATD program may consist of either technical credit or college credit. A public school district may offer an ATD program only as clock hour credit, with college credit awarded to a student upon articulation to a state college.

When developing the course sequence for the local implementation of this program, select courses that:

- Meet the skill development requirements of the standards and benchmarks of this program.
- Where reasonable and practicable, align with programs offered by your institution or other postsecondary institutions in Florida, including:
  - Related AS and AAS degrees.
  - Baccalaureate degrees within the same career pathway and/or Federal CIP code.

Visit FloridaShines' Discover Programs website to identify other institutions that offer similar programs to review their course sequencing. Where appropriate, course alignment between institutions offering related programs can facilitate interagency student articulation.

Visit FloridaShines' Common Prerequisites Manual to identify courses that are prerequisites for admission into an upper division program. When sub-baccalaureate courses are aligned to the course admissions requirements of baccalaureate programs with the same career pathway, students can enter upper division coursework seamlessly

Clock Hour Program

When offered at the district level, this program is a planned sequence of instruction consisting of 1 occupational completion point and the courses as shown below.

OCP	Course Number	Course Title	Length
A	EMS0110	Emergency Medical Technician	300 hours

College Credit Program

When offered at the college credit level, this ATD program is part of the Emergency Medical Services AS program (1351090402) and has a length of 12 credits.

Regulated Programs

This program meets the Department of Health trauma score card methodologies and Sudden Unexpected Infant Death Syndrome (SUIDS) training education requirements. Upon completion of this program, the instructor will provide a certificate to the student verifying that these requirements have been met. This program also meets the Department of Health's education requirements for HIV/AIDS, Domestic Violence and Prevention of Medical Errors. Although not a requirement for initial licensure, it is a requirement for renewal, therefore the instructor **may** provide a certificate for renewal purposes to the student verifying these requirements have been met.

Please refer to chapter 401, F.S. for more information on disqualification for the EMT license through the Office of Emergency Medical Services (EMS), Department of Health.

An EMT program must be taught by an instructor meeting the qualifications as set forth in 64J-1.0201, FAC.

Students must complete this program, or demonstrate the mastery of skills standards contained in this program, before advancing in either of the other programs in this cluster. Completion of this program should prepare the student for the certification examination approved for the state of Florida.

An American Heart Association or Red Cross certification or equivalent in "professional" BLS is required of all candidates for entrance into an EMT program.

The Student Performance Standards for Emergency Medical Technology-EMT were adapted from the US Department of Transportation (DOT) National EMS Educational Standards for EMT.

Once students have successfully completed the EMT Program, they may be given a certificate stating they have met all Emergency Medical Responder competency requirements.

Florida Statute 401.2701, requires that the instructor-student ratio should not exceed 1:6. Hospital activity shall include a minimum of 20 hours of supervised clinical supervision, including 10 hours in a hospital emergency department. Clinical activity shall include appropriate patient assessment skills, intervention and documentation relevant to each clinical rotation.

Field internship shall include a competency based program to assure appropriate pre-hospital assessment and management of medical and trauma patients, as well as associated manual skills. The field internship activity shall include a minimum of 5 emergency runs resulting in patient care and transport appropriate for the EMT. In addition, the patient care component should include minimum competencies in patient assessment, airway management and ventilation, trauma and medical emergencies.

It is strongly recommended this program be accredited by Commission on Accreditation of Allied Health Education Programs (CAAHEP).

“It is highly recommended, though not mandatory, that courses in medical terminology, anatomy, and pharmacology be completed before enrolling in EMT and Paramedic training.”

"All EMT/Paramedic students are required to complete the 4-hour Traffic Incident Management Safety (TIMS) course at least once. This requirement can be fulfilled either as a prerequisite or as part of the curriculum, at the discretion of the EMS education program."

Florida's Career Readiness Skills for CTE Programs

Employability Skills	
01.0	Apply academic skills to workplace scenarios.
	01.01 Use reading skills.
	01.02 Use writing skills.
	01.03 Use mathematical strategies and procedures.
	01.04 Use scientific principles and procedures.
02.0	Design a solution to an industry problem.
	02.01 Use critical thinking.
	02.02 Use creativity.
	02.03 Make sound decisions.
	02.04 Solve problems.
	02.05 Reason.
	02.06 Plan and organize.
03.0	Manage resources within an industry project
	03.01 Manage time.
	03.02 Manage money or resources.
	03.03 Manage materials.
	03.04 Manage personnel.
04.0	Oversee the subcomponents, operations and output of a technical or organizational system.
	04.01 Manage systems.
	04.02 Monitor systems.
	04.03 Improve systems.
05.0	Use information for decision making.
	05.01 Locate information.
	05.02 Organize information.
	05.03 Use information.

	05.04 Analyze information.
	05.05 Communicate information.
06.0	Apply relevant technology to workplace scenarios to aid productivity.
	06.01 Use technology.
07.0	Interpret and express interpersonal communication.
	07.01 Communicate verbally.
	07.02 Listen actively.
	07.03 Comprehend written material.
	07.04 Convey information in writing.
	07.05 Communicate nonverbally.
	07.06 Interpret nonverbal communication.
08.0	Interact with others to accomplish workplace goals.
	08.01 Collaborate with others in a team.
	08.02 Respond to customer needs.
	08.03 Exercise leadership.
	08.04 Negotiate to resolve conflict.
	08.05 Respect others.
09.0	Manage personal behavior to maximize productivity and professional growth.
	09.01 Demonstrate responsibility and self-discipline.
	09.02 Adapt and show flexibility.
	09.03 Work independently.
	09.04 Demonstrate a willingness to learn.
	09.05 Demonstrate integrity.
	09.06 Demonstrate professionalism.
	09.07 Take initiative.
	09.08 Display positive attitude.
	09.09 Take responsibility for professional growth.

Job Attainment	
10.0	Find, assess and apply to job opportunities.
10.01	Identify online job posts relevant to his or her career aspirations.
10.02	Compare and contrast the job posts' required qualifications, job duties, compensation, benefits and employers.
10.03	Define what information, documentation and writing prompts are required for the positions.
11.0	Communicate personal competence, character and fit for a job opportunity.
11.01	Develop a resume.
11.02	Write a cover letter.
11.03	Curate a professional portfolio that includes work products.
11.04	Prepare for and experience a mock job interview.
12.0	Cultivate and leverage relationships to professionally advance.
12.01	Request a signed reference letter, letter of recommendation and/or an online skill/professionalism endorsement.
12.02	Develop a plan to cultivate a professional digital footprint.
12.03	Develop a networking plan for a specific industry of interest.

Standards

After successfully completing this program, the student will be able to perform the following:

01.0 Demonstrate a simple depth, foundational breadth of knowledge of EMS systems.
02.0 Demonstrate a simple depth, simple breadth of knowledge of research and evidence-based decision making.
03.0 Demonstrate a fundamental depth, foundational breadth of knowledge of workforce safety and wellness.
04.0 Demonstrate a fundamental depth, foundational breadth of knowledge of the principles of medical documentation and report writing.
05.0 Demonstrate a simple depth, simple breadth of knowledge of the EMS communication system, communication with other health care professionals, and team communication.
06.0 Demonstrate a simple depth, simple breadth of knowledge of the principles of therapeutic communication.
07.0 Demonstrate a fundamental depth, foundational breadth of knowledge of medical legality and ethics.
08.0 Demonstrate a fundamental knowledge of the anatomy and function of all human systems to the practice of EMS.
09.0 Demonstrate a fundamental knowledge in the use of medical terminology.
10.0 Demonstrate a fundamental knowledge of the causes and pathophysiology of shock and the components of resuscitation.
11.0 Demonstrate a fundamental knowledge of life span development to patient assessment and management.
12.0 Demonstrate a simple knowledge of the principles of illness and injury prevention in emergency care.
13.0 Demonstrate a simple depth, simple breadth of knowledge of pharmacology, medication safety, and medication types used during an emergency.
14.0 Demonstrate a fundamental depth, simple breadth of knowledge of emergency medications within the scope of practice of the EMT.
15.0 Demonstrate a foundational depth, fundamental breadth of knowledge of airway management patients of all ages within the scope of practice of the EMT.
16.0 Demonstrate a fundamental depth, foundational breadth of knowledge of respiration.
17.0 Demonstrate a fundamental depth, foundational breadth of knowledge of assessment and management utilizing ventilation patients of all ages.
18.0 Demonstrate a fundamental depth, foundational breadth of knowledge of scene management and multiple patient situations.
19.0 Demonstrate a fundamental depth, simple breadth of knowledge of the primary assessment for all patient situations.
20.0 Demonstrate a fundamental depth, foundational breadth of knowledge of the components of history taking.
21.0 Demonstrate a fundamental depth, foundational breadth of knowledge of techniques used for a secondary assessment.
22.0 Demonstrate a simple depth, simple breath of knowledge of monitoring devices within the scope of practice of the EMT.
23.0 Demonstrate a fundamental depth, foundational breadth of knowledge of how and when to perform a reassessment for all patient situations.
24.0 Demonstrate a simple depth, foundation breadth of knowledge of pathophysiology, assessment and management of medical complaints.
25.0 Demonstrate a fundamental depth, foundational breadth of knowledge of the assessment and management of neurologic disorders/emergencies patients of all ages.
26.0 Demonstrate a fundamental depth, foundational breadth of knowledge of the assessment and management of abdominal and gastrointestinal disorders/emergencies patients of all ages.
27.0 Demonstrate a fundamental depth, foundational breadth of knowledge of the assessment and management of immunology disorders/emergencies patients of all ages.
28.0 Demonstrate a simple depth, simple breadth of knowledge of the assessment and management of a patient who may have an infectious disease patient of all ages.

29.0 Demonstrate a fundamental depth, foundational breadth of knowledge of the assessment and management of endocrine disorders/emergencies patients of all ages.
30.0 Demonstrate a fundamental depth, foundational breadth of knowledge regarding the assessment and management of psychiatric emergencies patients of all ages.
31.0 Demonstrate a fundamental depth, foundational breadth of knowledge of the assessment and management of cardiovascular emergencies patients of all ages.
32.0 Demonstrate a fundamental depth, foundational breadth of knowledge of the assessment and management of toxicological (poisoning and overdose) emergencies patients of all ages.
33.0 Demonstrate a fundamental depth, foundational breadth of knowledge of the assessment and management of respiratory disorders/emergencies patients of all ages.
34.0 Demonstrate a simple depth, simple breadth of knowledge of the assessment, and management of hematology disorders patients of all ages.
35.0 Demonstrate a simple depth, simple breath of knowledge of the assessment and management of genitourinary/ renal emergencies patients of all ages.
36.0 Demonstrate a fundamental depth, foundational breadth of knowledge of the assessment and management of gynecologic emergencies patients of all ages.
37.0 Demonstrate a fundamental depth, foundational breadth of knowledge of the assessment and management of non-traumatic fractures patients of all ages.
38.0 Demonstrate a simple depth, simple breadth of knowledge of assessment and management of diseases of the Eyes, Ears, Nose, and Throat patients of all ages.
39.0 Demonstrate a fundamental knowledge of the causes, pathophysiology, and management of shock and respiratory failure patients of all ages.
40.0 Demonstrate a fundamental depth, foundational breadth of knowledge of pathophysiology, assessment, and management of the trauma patient patients of all ages.
41.0 Demonstrate a fundamental depth, foundational breadth of knowledge of pathophysiology, assessment, and management of bleeding patients of all ages.
42.0 Demonstrate a fundamental depth, simple breadth of knowledge of pathophysiology, assessment, and management of chest trauma patients of all ages.
43.0 Demonstrate a fundamental depth, simple breadth of knowledge of pathophysiology, assessment, and management of abdominal and genitourinary trauma patients of all ages.
44.0 Demonstrate a fundamental depth, foundational breadth of knowledge of pathophysiology, assessment, and management of orthopedic trauma patients of all ages.
45.0 Demonstrate a fundamental depth, foundational breadth of knowledge of pathophysiology, assessment, and management of soft tissue trauma patients of all ages.
46.0 Demonstrate a fundamental depth, foundational breadth of knowledge of pathophysiology, assessment, and management of head, facial, neck, and spine trauma patients of all ages.
47.0 Demonstrate a fundamental depth, foundational breadth of knowledge of pathophysiology, assessment, and management of nervous system trauma patients of all ages.
48.0 Demonstrate a fundamental depth, foundational breadth of knowledge of pathophysiology, assessment, and management of trauma patients with special considerations patients of all ages.

49.0 Demonstrate a fundamental depth, foundational breadth of knowledge of pathophysiology, assessment, and management of environmental emergencies patients of all ages.
50.0 Demonstrate a fundamental depth, foundational breadth of knowledge of the pathophysiology, assessment, and management of multi-system trauma and blast injuries patients of all ages.
51.0 Demonstrate a fundamental depth, foundational breadth of knowledge of management of the pediatric patient within the scope of practice of the EMT.
52.0 Demonstrate a fundamental depth, foundational breadth of knowledge of management of the newborn and neonatal patient within the scope of practice of the EMT.
53.0 Demonstrate a fundamental depth, fundamental breath of knowledge of the management of the pediatric patient within the scope of practice of the EMT.
54.0 Demonstrate a fundamental depth, foundational breadth of knowledge of management of the geriatric patient within the scope of practice of the EMT.
55.0 Demonstrate a simple depth, simple breadth of knowledge of management of the patient with special challenges patients of all ages.
56.0 Demonstrate a simple depth, foundational breadth of knowledge of risks and responsibilities of transport.
57.0 Demonstrate a fundamental depth, fundamental breadth of knowledge of establishing and working within the incident management system.
58.0 Demonstrate a simple depth, foundational breadth of knowledge of responding to an emergency during a multiple casualty incident.
59.0 Demonstrate a simple depth, simple breadth of knowledge of safe air medical operations and criteria for utilizing air medical response.
60.0 Demonstrate a simple depth, simple breadth of knowledge for safe vehicle extrication and use of simple hand tools.
61.0 Demonstrate a simple depth, simple breadth of knowledge of risks and responsibilities of operating in a cold zone at a hazardous material or other special incident.
62.0 Demonstrate a simple depth, simple breadth of knowledge of risks and responsibilities of operating on the scene of a natural or man-made disaster.

Florida Department of Education
Student Performance Standards

Program Title: Emergency Medical Technician – ATD
Clock Hour Program Number: W170212

Course Number: EMS0110 **Occupational Completion Point: A** **Emergency Medical Technician – 300 Hours**	
01.0	**EMS Systems:** Demonstrate a simple depth, foundational breadth of knowledge of EMS systems. The student will be able to:
01.01	Define Emergency Medical Services (EMS) systems.
01.02	Discuss the historical background of the development of the EMS system.
01.03	Identify the four levels of national EMS providers (EMR, EMT, AEMT and PM) as well as the three levels (EMR, EMT, and PM) in the State of Florida.
01.04	Discuss the specific statutes and regulations regarding the EMS system in Florida.
01.05	Discuss vehicle and equipment readiness.
01.06	Characterize the EMS system's role in prevention and public education.
01.07	Systems of care, e.g., Stroke, STEMI, Trauma, Pediatrics (S, F).
01.08	MIH/CP and other EMS-related specialty roles (S, S).
01.09	Discuss the roles and responsibilities of the EMT related to personal safety of the crew, patient and by standers.
01.10	Discuss the roles and responsibilities of the EMT to operate emergency vehicles, provide scene leadership and perform patient assessment and administer emergency care.
01.11	Discuss the maintenance of and differences between certification and licensure for the EMS professional in the State of Florida and NREMT.
01.12	Define quality improvement and discuss the EMT's role in the process.
01.13	Quality improvement vs. quality assurance (S, F).
01.14	Role of medical oversight (S, S).
01.15	Culture of safety.
01.16	Patient safety (SF)
01.17	Identify the basics of common methods of payment for healthcare services.

	01.18 Analyze attributes and attitudes of an effective leader.
	01.19 Demonstrate effective techniques for managing team conflict.
	01.20 Describe factors that influence the current delivery system of healthcare.
	01.21 Discuss the importance of continuing medical education and skills retention.
	01.22 Continuum of care (S, F).
	01.23 Assess personal attitudes and demeanor that may distract from professionalism.
	01.24 Serve as a role model and exhibit professional behaviors in the following areas: • Integrity • Empathy • Self-motivation • Appearance and personal hygiene • Self-confidence • Communications (including phone, email and social media etiquette) • Time management • Teamwork and diplomacy • Respect • Patient advocacy (inclusive of those with special needs, alternate lifestyles and cultural diversity) • Careful delivery of service
02.0	**Research:** Demonstrate a simple depth, simple breadth of knowledge of research and evidence-based decision making. The student will be able to:
	02.01 Discuss EMS research and evidence-based decision making • Conduct scientific literature searches • Read, interpret, and extract information from journal articles relevant to a project
	02.02 Explain the importance of assessing and treating patients based on evidence-based decision-making.
	02.03 Interpret graphs, charts, and tables.
	02.04 Measure time, temperature, distance, capacity, and mass/weight.
	02.05 Convert and use traditional and metric units.
	02.06 Make estimations, approximations and judge the reasonableness of the result.
	02.07 Convert time from a 12-hour format to a 24-hour format
	02.08 Demonstrate ability to evaluate and draw conclusions.

	02.09 Calculate ratios.
	02.10 Explain the rationale for the EMS system gathering data.
	02.11 Impact of research on EMT care (S, S).
	02.12 Data collection (S, S).
	02.13 Evidence-based decision making (S,S).
03.0	**Workforce Safety and Wellness:** Demonstrate a fundamental depth, foundational breadth of knowledge of workforce safety and wellness. The student will be able to:
	03.01 Explain the need to determine scene safety.
	03.02 Discuss the importance of body substance isolation (BSI).
	03.03 Describe the steps and equipment the EMT should take for personal protection from airborne and blood borne pathogens and communicable disease.
	03.04 List possible emotional reactions that an individual (EMT and EMT family, Patient and Patient family) may experience when faced with trauma, illness, death and dying.
	03.05 Discuss the steps the EMT should take when approaching a family confronted with death and dying.
	03.06 Recognize the warning signs of personal stress and discuss the strategies and resources available for EMTs to utilize.
	03.07 Demonstrate good body mechanics while using a stretcher and other patient moving devices.
	03.08 Discuss the guidelines and safety precautions to be followed when lifting and moving patients and equipment.
	03.09 Discuss patient positioning in common emergency situations.
	03.10 Discuss situation that may require the use of medical restraints on the patient and explain guidelines and safety consideration for their use.
	03.11 Define “infectious disease” and “communicable disease.”
	03.12 Disease transmission (F, F).
	03.13 Describe the routes of transmission and associated risks for infectious disease.
	03.14 Explain the mode of transmission and the steps to prevent/deal with an exposure of hepatitis, meningitis, tuberculosis and HIV.
	03.15 Explain how immunity to infectious diseases is acquired.
	03.16 Explain post exposure management of exposure to patient blood or body fluids, including proper notification documentation.

	03.17 Describe the components of physical fitness and mental wellbeing.
	03.18 Identify personal health practices and environmental factors which affect physical, mental, and emotional wellbeing.
	03.19 Prevention of work-related injuries and illnesses (F, F).
	03.20 Responder mental health, resilience and suicide prevention (F, F).
	03.21 Wellness principles (F, F).
	03.22 Discuss complementary and alternative health practices.
	03.23 Explain the basic concepts of positive self-image, wellness and stress.
	03.24 Discuss the need for a wellness and stress control plan that can be used in personal and professional life.
	03.25 Explore the importance of adequate nutrition (i.e. U.S. Department of Agriculture's MyPlate food guide (www.choosemyplate.gov)).
	03.26 Demonstrate safe behaviors in the proper use of medical equipment.
	03.27 Explain the theory of root- cause analysis.
	03.28 Identify and describe methods in medical error reduction and prevention in the various healthcare settings.
	03.29 Identify and practice security procedures for medical supplies and equipment in various healthcare settings.
	03.30 Describe fire, safety, disaster and evacuation procedures in the various healthcare settings.
	03.31 Discuss applicable accrediting and regulatory agency patient safety guidelines.
04.0	**Documentation:** Demonstrate a fundamental depth, foundational breadth of knowledge of the principles of medical documentation and report writing. The student will be able to:
	04.01 Discuss applications of technology in healthcare.
	04.02 Demonstrate basic computer skills.
	04.03 Interpret and utilize information from electronic health records.
	04.04 Identify methods of electronic communication to access and distribute data.
	04.05 Describe the use and importance of properly written communication and patient care documentation.
	04.06 Explain the legal implication of the patient care report.
	04.07 Supporting medical necessity (S,S).

	04.08 Identify the minimum dataset reference patient information and administrative information on the patient care report.
	04.09 Understand how to document refusal of care, including legal implications.
	04.10 Discuss the implications of the Health Insurance Portability and Accountability Act of 1996 on confidential documentation.
	04.11 Describe the special considerations concerning mass casualty incident documentation.
	04.12 Demonstrate completion of a patient care report for a medical and trauma patient.
05.0	**EMS System Communication:** Demonstrate a simple depth, simple breadth of knowledge of the EMS communication system, communication with other health care professionals, and team communication. The student will be able to:
	05.01 Understand the basic principles of the various types of communications equipment used in EMS.
	05.02 Describe the use of radio communication and correct radio procedures, including the proper methods of initiating and terminating the radio call/transmission.
	05.03 Explain the rationale for providing efficient and effective radio communications and patient reports.
	05.04 Identify the essential components of the verbal report and legal aspects that need to be considered.
	05.05 Perform an organized and concise radio transmission.
	05.06 Team communication and dynamics (S,S).
	05.07 Perform an organized, concise verbal patient report that would be given to the staff at a receiving facility.
	05.08 Perform a brief, organized verbal report that would be given during transfer of care at an incident scene.
06.0	**Therapeutic Communication:** Demonstrate a simple depth, simple breadth of knowledge of the principles of therapeutic communication. The student will be able to:
	06.01 Describe principles of therapeutic and effective communication with patients.
	06.02 Health care literacy (S, S).
	06.03 Non-discriminatory communication that addresses inherent or unconscious bias, is culturally aware and sensitive, and intended to improve patient outcome (S, S).
	06.04 Discuss basic speaking and active listening skills.
	06.05 Recognize the importance of patient/client education regarding healthcare.
	06.06 Discuss the adjustment of communication strategies to effectively communicate with patients with: • Differing age groups • Differing developmental stages • Special needs

	• Differing cultures, including language barriers
06.07	Discuss the communication techniques that should be used to interact with the patient, patient family, bystanders, and individuals from other agencies including verbal diffusion and interview techniques.
06.08	Discuss the strategies for interviewing persons in special situations.
06.09	Distinguish between and respond to verbal and non-verbal cues.
06.10	Analyze elements of communication using a sender-receiver/close loop model.
06.11	Exhibit positive non-verbal behaviors.
06.12	Establish proper patient rapport.
07.0	**Medical/Legal and Ethics:** Demonstrate a fundamental depth, foundational breadth of knowledge of medical legality and ethics. The student will be able to:
07.01	Discuss the rational, importance, and limitations of patient autonomy.
07.02	Differentiate between expressed, implied and involuntary consent.
07.03	Discuss the methods of obtaining consent and procedures for minors.
07.04	Discuss the issues of abandonment, negligence, false imprisonment and battery and their implications to the EMT.
07.05	Discuss the implications for the EMT in patient refusal of care and/or transport.
07.06	Explain the importance, necessity and legality of patient confidentiality.
07.07	Discuss the importance of Do Not Resuscitate [DNR] (advance directives) and local or Florida provisions regarding EMS application.
07.08	Patient rights/advocacy (S, S).
07.09	Discuss State of Florida and Federal special reporting situations including: • Abuse • Sexual assault • Gunshot and knife wounds • Communicable disease • Animal Bites
07.10	Differentiate between civil tort and criminal actions.
07.11	Discuss the elements of negligence and defenses/protections from liability.
07.12	Discuss the role of the EMT at crime scenes and preservation of evidence.

	07.13 Define ethics and morality and discuss their implication for the EMT.
	07.14 Discuss Florida legislation such as: • Baker Act (FS 394.451) • Marchman Act (FS 397.601 and FS 397.675) • Emergency Examination and Treatment of Incapacitated Persons Act (FS 401.445)
	07.15 Differentiate between the scope of practice and the standard of care as applied to the EMT.
	07.16 Discuss the legal concepts and limitations of immunity, including Good Samaritan statutes and governmental immunity.
	07.17 Describe the appropriate patient management and care techniques in a refusal of care situation.
	07.18 Analyze the relationship between the law, morals and ethics in EMS and the premise that should under lie the EMTs ethical decisions.
	07.19 Describe the criteria necessary to honor an advance directive.
	07.20 Explain the rationale for the needs, benefits and varying degrees of advance directives.
08.0	**Anatomy and Physiology**: Demonstrate a fundamental knowledge of the anatomy and function of all human systems to the practice of EMS. The student will be able to:
	08.01 Identify the following topographic terms: • Medial • Lateral • Proximal • Distal • Superior • Inferior • Anterior • Posterior • Midline • Right and left • Mid-clavicular • Bilateral • Mid-axillary
	08.02 Describe the life support chain, aerobic metabolism, and anaerobic metabolism.
	08.03 Define anatomy, physiology, pathophysiology, and homeostasis.
	08.04 Identify and describe the anatomical structures and functions of the following: • Skeletal system • Muscular system

	• Respiratory system • Circulatory/Cardiovascular system • Nervous system • Integumentary system • Digestive system • Endocrine system • Renal system • Reproductive system • Lymphatic system
08.05	Explain cellular anatomy and physiology.
08.06	Explain cellular respiration.
08.07	Discuss cell division.
08.08	Describe the different types of muscle tissues including skeletal, smooth and cardiac.
08.09	Name and identify the location of the bones of the axial and appendicular skeleton.
08.10	Describe the classification and types of joints.
08.11	Discuss the mechanisms of breathing including: • mechanical ventilation • pulmonary volumes • dead space • lung compliance
08.12	Explain the diffusion of gases in external and internal respiration.
08.13	Describe oxygen and carbon dioxide transport in the blood.
08.14	Describe nervous and chemical mechanisms that regulate respirations.
08.15	Discuss respiration and acid-base balance.
08.16	Discuss the hemodynamics of blood pressure.
08.17	Discuss the role of nutrition, metabolism and body temperature on body function.
08.18	Describe the causes, advantages, and disadvantages of a fever.
08.19	Discuss the hypothalamus functions as the thermostat in the body.

09.0	**Medical Terminology:** Demonstrate a fundamental knowledge in the use of medical terminology. The student will be able to:
	09.01 Identify medical terminology word parts such as: • Root words • Prefixes • Suffixes • Combining forms
	09.02 Correctly utilize medical terminology describing each of the following: • Body structures • Functions • Conditions and disorders • Body regions • Cavities • Areas • Landmarks
	09.03 Correctly use medical abbreviations and symbols.
	09.04 Read and understand basic medical documentation in medical records and medical reports.
	09.05 Communicate with healthcare professionals utilizing basic medical terminology.
	09.06 Explain the rationale for using accepted medical terminology correctly.
10.0	**Pathophysiology:** Demonstrate a fundamental knowledge of the causes and pathophysiology of shock and the components of resuscitation. The student will be able to:
	10.01 Discuss signs of irreversible death.
	10.02 Review the anatomy and physiology of the respiratory and cardiovascular systems.
	10.03 Discuss and identify the pathophysiology of respiratory failure and respiratory and cardiac arrest.
	10.04 Understand shock, including pathophysiology, causes, and the signs and symptoms associated with the various types of shock.
	10.05 Discuss the variations in the pathophysiology of shock patients of all ages.
11.0	**Life Span Development:** Demonstrate a fundamental knowledge of life span development to patient assessment and management. The student will be able to:
	11.01 Describe the major physiologic and psychosocial characteristics patients of all ages.
12.0	**Public Health:** Demonstrate a simple knowledge of the principles of illness and injury prevention in emergency care. The student will be able to:

	12.01 Define public health and explain the goal of the public health field.
	12.02 Identify the EMS role within the public health field.
	12.03 Discuss basic concepts of epidemiology.
	12.04 Discuss ways of EMS involvement in injury prevention.
	12.05 Identify areas of need for prevention programs in the community.
13.0	**Principles of Pharmacology:** Demonstrate a simple depth, simple breadth of knowledge of pharmacology, medication safety, and medication types used during an emergency. The student will be able to:
	13.01 Explain the "rights" of medication administration and describe how each one related to EMS.
	13.02 Discuss and differentiate the various medication forms and the appropriate routes of administration
	13.03 Describe the difference between a generic medication name and trade name and provide an example of each.
	13.04 Specific medication classes to be determined locally • Class names (S, S) • Class indications (S, S) • Class complications (S, S) • Class side effects (S, S) • Polypharmacy (S, S)
	13.05 Discuss the components and elements of a drug profile including: • Class • Actions • Contraindications • Side effects • Dose • Route • Adverse drug reactions (S, S) • Medication response relationships (F,F)
	13.06 Describe the role of medical direction in medication administration and explain the difference between direct orders (online) and standing orders (off-line).
14.0	**Pharmacology:** Demonstrate a fundamental depth, simple breadth of knowledge of emergency medications within the scope of practice of the EMT. The student will be able to:
	14.01 State the following for each medication that can be administered by an EMT as dictated by the State of Florida and local medical direction: • Medication safety • Medication legislation

	• Naming • Classifications • Storage and security • Medication interactions • Adverse drug reactions • Metabolism and excretion • Mechanism of action • Medication response relationships
14.02	State the following for each medication that can be administered by an EMT as dictated by the State of Florida and local medical direction (Acute Medications): • Generic / Trade Names, Drug Classifications • Effects • Actions • Indication • Contraindications • Complications • Routes of administration • Side effects • Interactions • Doses of medications
14.03	Demonstrate the steps in properly inspecting each type of medication. (Medication Administration) • Use a Medication Cross Check procedure • Use an autoinjector • Use a unit-dose, premeasured intranasal device • Administer medications to a patient • Provide pain management, including ethical and safety considerations • Routes of administration
14.04	Discuss the difference between administration versus assistance of patient medications. (Chronic or Maintenance Medications) • Class names • Class indications • Class complications • Class side effects • Polypharmacy
15.0	**Respirations:** Demonstrate a fundamental depth, foundational breadth of knowledge of respiration. The student will be able to:
15.01	Anatomy of the Respiratory System and review the pulmonary ventilation process to include mechanics of ventilation and alveolar ventilation (tidal volumes, dead space, etc.): • Control of respirations

	• Mechanics of respiration • Pulmonary ventilation • Oxygenation • Mechanical ventilation
15.02	Physiology and pathophysiology of respiration • Pulmonary ventilation • Oxygenation • Respiration • External • Internal • Cellular
15.03	Demonstrate the correct operation of oxygen tanks and regulators.
15.04	Describe the following regarding supplemental oxygen delivery devices: • Indications • Contraindications • Advantages • Disadvantages • Complications • Liter flow range • Concentration of delivered oxygen • Procedures • Purpose • Components
15.05	Demonstrate the use of low, medium, high, and variable concentration oxygen delivery devices for all age groups.
15.06	Describe assessment and management for adequate and inadequate respiration, including the use of pulse oximetry and capnography.
15.07	Explain the rationale for providing adequate oxygenation through high inspired oxygen concentrations to patients who, in the past, may have received low concentrations.
15.08	Discuss the use of an oxygen humidifier and the requirements needed for its use.
15.09	Discuss the differences between negative pressure and positive pressure ventilation.
16.0	**Airway Management:** Demonstrate a fundamental depth, foundational breadth of knowledge of airway management patients of all ages within the scope of practice of the EMT. The student will be able to:
16.01	Review the structures and functions of the Anatomy of the Airway and the Respiratory System (Include age- related variations in pediatric and geriatric patients). • Normal • Abnormal

	• Special Considerations (MDI, In-Line Neb, Simple Face Mask, Venturi, CPAP/BiPAP)
16.02	Describe appropriate assessment of the airway and the management for a patient with or without adequate breathing (Include age-related variations in pediatric and geriatric patients).
16.03	Describe the Techniques of assuring a patent airway, indications for airway management, and demonstrate the steps in performing the head-tilt chin-lift and jaw thrust in all age groups (Include age- related variations in pediatric and geriatric patients). • Demonstrate the techniques of suctioning. • Demonstrate relief of FBAO. • Demonstrate how to insert an oral and nasal -airway adjunct. • Demonstrate how to insert both esophageal and supra-glottic airways.
17.0	**Artificial Ventilations:** Demonstrate a fundamental depth, foundational breadth of knowledge of assessment and management utilizing ventilation patients of all ages. The student will be able to:
17.01	Effect of ventilation on cardiac output • E.g., Bag Valve Mask, Ventilator, CPAP, Hyper Mechanical Inflation
17.02	Demonstrate how to ventilate a patient with a pocket mask.
17.03	Demonstrate the safe and effective ventilation for a patient with a BVM for one or two rescuers using oral-nasal adjuncts with appropriate airway positioning.
17.04	Discuss the signs of adequate and inadequate ventilation using the BVM.
17.05	Describe the steps involved in performing a comprehensive assessment of ventilations.
17.06	Demonstrate how to ventilate a patient with a stoma.
17.07	Demonstrate the use of various devices used in the assessment of supra-glottic airway placement.
17.08	Describe the following for a patient with an automatic transport ventilator (ATV): • Indications • Contraindications • Advantages • Disadvantages • Complications • Technique for ventilating
17.09	Describe the following for a patient with a CPAP: • Indications • Contraindications • Advantages • Disadvantages • Complications • Technique for ventilating

18.0	**Scene Size-Up:** Demonstrate a fundamental depth, foundational breadth of knowledge of scene management and multiple patient situations**.** The student will be able to:
18.01	Recognize and describe hazards/potential hazards at the scene.
18.02	Discuss common mechanisms of injury/nature of illness.
18.03	Discuss the priority considerations for multiple-patient situations.
18.04	Explain why it is important for the EMT to anticipate and determine the need of appropriate Scene management including but not limited to traffic incident management, additional resources, or specialty resources.
18.05	Discuss the importance of continuous scene assessment to ensure safety of the EMS Impact of the environment on team and the patient care.
18.06	Explain why it is important for the EMT to anticipate and determine the need for additional or specialized resources.
18.07	Discuss the importance of continuous scene assessment to ensure safety of the EMS team and the patient.
18.08	Discuss the minimum standard precautions that should be followed and PPE that should be worn as appropriate.
18.09	Discuss special considerations for dealing with a violent scene.
18.10	Explain the rationale for crew members to evaluate scene safety prior to entering.
18.11	Explain how patient situations affect your evaluation of mechanism of injury or illness.
19.0	**Primary Assessment:** Demonstrate a fundamental depth, simple breadth of knowledge of the primary assessment for all patient situations. The student will be able to:
19.01	Summarize the elements of a general impression of the patient.
19.02	Explain the reason for performing a primary assessment.
19.03	Discuss and demonstrate methods of assessing level of responsiveness using AVPU.
19.04	Discuss and demonstrate methods of assessing the airway and providing airway care patients of all ages.
19.05	Describe and demonstrate methods used for assessing if a patient is breathing patients of all ages.
19.06	Differentiate between a patient with adequate and inadequate breathing.
19.07	Describe and demonstrate the methods used to obtain a pulse patients of all ages.
19.08	Discuss and demonstrate assessing the patient for external bleeding.
19.09	Describe and demonstrate the assessment and interpretation of skin color, temperature, moisture and capillary refill patients of all ages.

	19.10 Explain the reasons prioritizing a patient for care and transport.
	19.11 Describe when it is appropriate to expose the patient completely.
	19.12 Differentiate between critical life-threatening, potentially life- threatening, and non-life-threatening patient presentations.
20.0	**History-Taking:** Demonstrate a fundamental depth, foundational breadth of knowledge of the components of history taking. The student will be able to:
	20.01 Determine and investigate the chief complaint (MOI/NOI).
	20.02 Describe components of the patient history.
	20.03 Explain the importance of obtaining a SAMPLE and OPQRST history.
	20.04 Acknowledge the feelings patients experience during assessment.
	20.05 Discuss the value of obtaining a family and social history.
	20.06 Describe examples of different techniques the EMT may use to obtain information from patients, family or bystanders during the history taking process.
21.0	**Secondary Assessment:** Demonstrate a fundamental depth, foundational breadth of knowledge of techniques used for a secondary assessment. The student will be able to:
	21.01 Discuss the components and techniques of the physical exam and skills involved.
	21.02 Discuss the indications for performing: • Rapid assessment • Focused exam • Head to toe exam
	21.03 Demonstrate: • Rapid exam • Focused exam • Head to toe exam
	21.04 Describe and demonstrate the techniques of inspection, palpation, percussion, and auscultation. • Respiratory system including breath sound quality • Cardiovascular system • Neurological system • Musculoskeletal system • Major anatomical regions
	21.05 Describe and demonstrate the importance of obtaining a baseline set of vital signs. • E.g., Non-Invasive Blood Pressure, Blood Glucose, Temperature …
	21.06 Discuss blood pressure ranges patients of all ages.

22.0	**Monitoring Devices:** Demonstrate a simple depth, simple breath of knowledge of monitoring devices within the scope of practice of the EMT. The student will be able to:
	22.01 Describe and demonstrate the purpose, indications, procedure, normal findings, and limitations of the following patient monitoring technologies. • Pulse oximetry • Glucometry • Capnography • Noninvasive BP monitoring • Thermometry • Telemetry • Cardiac monitoring – 12 lead ECG acquisition and transmission
	22.02 Demonstrate proper placement of a cardiac monitor and diagnostic ECG leads.
23.0	**Reassessment:** Demonstrate a fundamental depth, foundational breadth of knowledge of how and when to perform a reassessment for all patient situations. The student will be able to:
	23.01 Describe the components of reassessment and demonstrate the skills involved.
	23.02 Discuss the reasons for repeating the primary assessment as part of the reassessment.
	23.03 Explain trending assessment components and its value to other health professionals who assume care of the patient.
	23.04 Demonstrate the reassessment of patients of all ages.
24.0	**Medical Overview:** Demonstrate a simple depth, foundation breadth of knowledge of pathophysiology, assessment and management of medical complaints. The student will be able to:
	24.01 Pathophysiology, assessment, and management of a medical complaints to include • Identify factors that affect the patient Transport Decision and Medically Appropriate Destination • E.g., Scene Safety, Environmental Factors, Chief Complaint, Preconceptions.
	24.02 Discuss forming a field impression and utilizing available information to determine a differential diagnosis.
25.0	**Neurology:** Demonstrate a fundamental depth, foundational breadth of knowledge of the assessment and management of neurologic disorders/emergencies patients of all ages. The student will be able to:
	25.01 Review the anatomy and physiology of the nervous system.
	25.02 Describe the pathophysiology of the following neurologic disorders: • Altered mental status • Stroke • Transient ischemic attack • Headache • Seizures • Syncope

		• Dementia vs. delirium • Alzheimer's disease • Headache • Brief Resolved Unexplained Event (BRUE) • Other neurological disorders to be determined locally
	25.03	Discuss and identify the causes, signs and symptoms of ischemic strokes, hemorrhagic strokes, and transient ischemic attacks and their similarities and differences.
	25.04	Discuss and demonstrate how to use a stroke scoring system in the assessment of patients with suspected stroke.
	25.05	Define and differentiate generalize seizure, partial seizure and status epilepticus and list their possible causes.
	25.06	Define and differentiate migraine headache, sinus headache, tension headache and discuss how to distinguish harmless headaches from something more serious.
	25.07	Define "altered mental status" and identify the possible causes.
	25.08	Describe and demonstrate the assessment and management of the patient with various neurological emergencies in patients of all ages to include: • Strokes • Headaches • Seizures • Altered mental status
	25.09	Discuss the transport of the stroke patient to the appropriate treatment center.
26.0	**Abdominal and Gastrointestinal Disorder:** Demonstrate a fundamental depth, foundational breadth of knowledge of the assessment and management of abdominal and gastrointestinal disorders/emergencies patients of all ages. – The student will be able to:	
	26.01	Review the basic anatomy and physiology the gastrointestinal, genital and urinary systems.
	26.02	Define and describe the pathophysiology of the following abdominal and gastrointestinal disorders: • Abdominal pain • Acute abdomen • Peritonitis • Appendicitis • Pancreatitis • Cholecystitis • Gastrointestinal bleeding • Esophageal varices • Gastroenteritis • Ulcers • Intestinal obstruction • Hernia

	• Abdominal aortic aneurysm
	26.03 Identify the signs and symptoms of common GI disorders.
	26.04 Describe and demonstrate the assessment and management of the patient with various gastrointestinal emergencies.
	26.05 Differentiate between hemorrhagic and non-hemorrhagic abdominal pain.
27.0	**Immunology:** Demonstrate a fundamental depth, foundational breadth of knowledge of the assessment and management of immunology disorders/emergencies patients of all ages. The student will be able to:
	27.01 Define and differentiate allergic reaction and anaphylaxis.
	27.02 Describe the pathophysiology of the following immunology disorders: • allergic reaction • anaphylaxis • anaphylactic shock
	27.03 Describe and demonstrate the assessment and management of the patient in patients of all ages experiencing an allergic or anaphylactic reaction.
	27.04 Review the following for the epinephrine auto-injector: • generic and trade names • medication forms • dose • administration • action • contraindications
	27.05 Demonstrate the use of epinephrine auto-injector.
	27.06 Review the anatomy and physiology of the organs and structures related to anaphylaxis.
	27.07 Describe the incidence, morbidity and mortality of anaphylaxis.
	27.08 Recognize the signs and symptoms related to anaphylaxis.
	27.09 Describe the risk factors for and prevention of anaphylaxis and appropriate patient education.
	27.10 Discuss common antigens most frequently associated with anaphylaxis.
	27.11 Explain the importance of separating the patient from the allergen when possible.
28.0	**Infectious Disease:** Demonstrate a simple depth, simple breadth of knowledge of the assessment and management of a patient who may have an infectious disease patients of all ages. The student will be able to:
	28.01 Discuss the causes of infectious diseases

	28.02 Describe the pathophysiology of infectious diseases of significant public health concern.
	28.03 Describe and demonstrate the assessment and management of the patient in patients of all ages experiencing an infectious disease.
	28.04 Discuss mandatory notification to state or federal agencies of various diseases.
	28.05 Identify patients with risk factors for infectious disease.
	28.06 Explain the principles and practices of infection control in prehospital care.
	28.07 Describe and discuss the rationale for the various types of PPE.
	28.08 Discuss the proper disposal of contaminated supplies (sharps, gauze sponges, tourniquets, etc.).
	28.09 Discuss decontamination of the ambulance and disinfection of patient care equipment, and areas in which care of the patient occurred.
	28.10 Describe the actions to take if the EMS provider is exposed to an infectious disease.
	28.11 Demonstrate the ability to comply with body substance isolation guidelines.
	28.12 Discuss the pathophysiology, risk factors, assessment, and prehospital management of sepsis/systemic inflammatory response syndrome (SIRS)
	28.13 Identify the signs and symptoms and discuss the assessment and prehospital management of a patient in septic shock.
	28.14 Describe the risk factors for and prevention of infectious disease and appropriate patient education (including but not limited to hand-washing, PPE use, and disposal of contaminated supplies).
29.0	**Endocrine Disorders:** Demonstrate a fundamental depth, foundational breadth of knowledge of the assessment and management of endocrine disorders/emergencies patients of all ages. The student will be able to:
	29.01 Review the anatomy and physiology of the endocrine system and its main function in the body.
	29.02 Describe the pathophysiology and signs and symptoms of the following endocrine disorders: • Insulin dependent Diabetes Mellitus • Non-insulin dependent Diabetes Mellitus • Hypoglycemia • Hyperglycemia • Diabetic Ketoacidosis (DKA) • Hyperglycemic Hyperosmolar Non-ketotic Syndrome (HHNS)
	29.03 Define and differentiate between Type I and Type II Diabetes.
	29.04 Identify and demonstrate the steps in the management of the patient taking diabetic medicine with an altered mental status and a history of diabetes, patients of all ages.
	29.05 Review the following for oral glucose:

		• Generic and trade names • Medication forms • Dose • Administration • Action • Contraindications
	29.06	Demonstrate the steps of using a glucometer device and administering oral glucose.
	29.07	Describe and demonstrate the assessment and the management of the patient experiencing an endocrinologic emergency to include hypo- and hyper-glycemia.
	29.08	Discuss the general assessment findings associated with endocrinologic emergencies. Patients of all ages.
	29.09	Describe the risk factors for and prevention of endocrine emergencies, including but not limited to healthy lifestyles and modifiable risk factors, the use of blood sugar monitoring devices and self-administration of prescribed medications.
30.0		**Psychiatric:** Demonstrate a fundamental depth, foundational breadth of knowledge regarding the assessment and management of psychiatric emergencies patients of all ages. The student will be able to:
	30.01	Differentiate among behavior, psychiatric disorders and behavioral emergencies
	30.02	Discuss common psychiatric disorders and behavioral emergencies.
	30.03	Discuss the general factors that may cause an alteration in a patient's behavior.
	30.04	Discuss patterns of violence, abuse, and neglect.
	30.05	Discuss the risk factors/signs or symptoms of various psychiatric emergencies to include acute psychosis, suicide ideation, excited delirium, anxiety, depression, medical fear, substance use disorder, and PTSD.
	30.06	Manage a behavioral emergency scenario applying knowledge of medical/legal Florida Statutes.
	30.07	Describe and demonstrate the assessment and management of the patient experiencing a behavioral or psychiatric emergency.
	30.08	Discuss the risk factors/signs or symptoms of various psychiatric emergencies to include acute psychosis, suicide ideation, excited delirium, anxiety, depression, medical fear, substance use disorder, and PTSD.
	30.09	Demonstrate an understanding of appropriate and available mental health resources and provide patient education.
	30.10	Describe and demonstrate the assessment and management of the patient experiencing a behavioral or psychiatric emergency, patients of all ages.
	30.11	Describe the biological, psychosocial, and sociocultural influences on psychiatric disorders.
	30.12	Describe the special considerations for the safety of the EMS provider and EMS crew, the patient and bystanders when dealing with behavioral and psychiatric emergencies.
	30.13	Describe and demonstrate methods of restraint that may be used in the management of a patient with a behavioral emergency.

	30.14 Explain the importance of provider behavior and communication in the care of a patient with a behavioral emergency.
31.0	**Cardiovascular**: Demonstrate a fundamental depth, foundational breadth of knowledge of the assessment and management of cardiovascular emergencies patients of all ages. The student will be able to:
	31.01 Review the basic anatomy and physiology of the cardiovascular system.
	31.02 Describe the pathophysiology and signs and symptoms of the following cardiovascular disorders: • Acute coronary syndrome • Angina pectoris • Thromboembolism • Myocardial infarction • Hypertensive emergencies • Aortic aneurysm/dissection • Left and right sided heart failure • Cardiogenic shock • Cardiac arrest
	31.03 Describe and demonstrate the assessment and management of the patient experiencing a cardiac emergency.
	31.04 Discuss the indications and contraindications for automated external defibrillation (AED). (including automatic, manual and vest type).
	31.05 Explain the impact of age and weight on defibrillation.
	31.06 Discuss the position of comfort for patients with various cardiac emergencies.
	31.07 Explain the rationale for early defibrillation.
	31.08 Discuss and differentiate among various types of external defibrillators.
	31.09 Discuss and differentiate among the various types of implanted cardiac devices.
	31.10 Understand the importance of maintenance and operators check list for AED's.
	31.11 Demonstrate the ability to use an AED according to the latest American Heart Association (AHA) guidelines.
	31.12 Explain the role medical direction plays in the use of automated external defibrillation.
	31.13 Explain the rationale for administering nitroglycerin oxygen and ASA to a patient with chest pain or discomfort.
	31.14 Demonstrate the assessment and documentation of patient response to the automated external defibrillator.
	31.15 Demonstrate the assessment and documentation of patient response to nitroglycerin.
	31.16 Discuss the purpose and use of CPR assist devices.

	31.17 Describe the risk factors for and prevention of cardiac related diseases and provide appropriate patient education.
	31.18 Discuss the signs and symptoms of acute coronary syndrome and provide appropriate patient education to include self-administration of prescribed medications.
32.0	**Toxicology:** Demonstrate a fundamental depth, foundational breadth of knowledge of the assessment and management of toxicological (poisoning and overdose) emergencies patients of all ages. The student will be able to:
	32.01 Define and differentiate among toxicology, poisoning, and overdose.
	32.02 Describe the pathophysiology and signs and symptoms of the following toxicological emergencies, including but not limited to: • Food poisoning • Carbon monoxide poisoning • Cyanide poisoning • Exposure to acid or alkaline substances • Exposure to hydrocarbons • Methanol ingestion • Isopropanol ingestion • ethylene glycol ingestion • Exposure to poisonous plants • Drug withdrawal • Alcoholic syndrome • Withdrawal syndrome (including delirium tremens) • Illicit drug use • Medication overdose • Opioid overdose • Organa phosphate overdose • Nerve agents
	32.03 Discuss various ways that toxins enter the body. Including inhalation, ingestion, injection, and absorption.
	32.04 Discuss and demonstrate the assessment and management for the patient with a toxicological emergency.
	32.05 Discuss the role of the Poison Control Center with the nationwide contact number 800-222-1222 in the United States.
	32.06 Explain the rationale for contacting medical direction early in the prehospital management of a patient with a toxicological emergency.
	32.07 Review the following for Narcan (naloxone): • Generic and trade names • Medication forms • Dose • Administration • Action

	• Contraindications
32.08	Discuss the use of medication assisted treatments for substance misuse disorders including suboxone, methadone, and naltrexone and potential complications.
32.09	Discuss safe uses and practices with potentially toxic substances while providing appropriate patient education
33.0	**Respiratory:** Demonstrate a fundamental depth, foundational breadth of knowledge of the assessment and management of respiratory disorders/emergencies patients of all ages. The student will be able to:
33.01	Review the basic anatomy and physiology of the respiratory system.
33.02	Describe the pathophysiology and signs and symptoms of the following respiratory disorders: • Chronic Obstructive Pulmonary Disease • Asthma • Bronchiolitis • Pulmonary Edema • Spontaneous Pneumothorax • Hyperventilation Syndrome • Cystic Fibrosis • Pulmonary Embolism • Pneumonia • Viral Respiratory Infections • Poisonous Exposures • Bacterial respiratory infections
33.03	Discuss signs of adequate air exchange.
33.04	Discuss the signs and symptoms of a patient across the continuum from respiratory distress to failure.
33.05	Describe and demonstrate the assessment and management of the patient with a respiratory emergency. Patients of all ages.
33.06	Review the following for the metered-dose inhalers and small volume nebulizers for medications within the scope of practice of the EMT: • Generic name • Medication forms • Dose • Administration • Action • Indications • Contraindications
33.07	Describe and demonstrate the steps in facilitating the use of an inhaler and a small volume nebulizer.

	33.08 Differentiate between upper and lower airway obstruction.
	33.09 Demonstrate assessment and interpretation of normal and abnormal lung and breath sounds. Patients of all ages.
	33.10 Discuss common respiratory disorders, self-administered medications, and equipment (including, but not limited to home oxygen, nebulizers, and CPAP) and provide appropriate patient education.
34.0	**Hematology:** Demonstrate a simple depth, simple breadth of knowledge of the assessment, and management of hematology disorders patients of all ages. The student will be able to:
	34.01 Review the compositions and functions of blood and plasma.
	34.02 Describe the pathophysiology of the following hematology disorders: • Anemia • Sickle Cell Anemia / Sickle Cell Crisis • Hemophilia/Clotting disorders
	34.03 Describe and demonstrate the assessment and the management of the patient with a hematological disorder. Patients of all ages.
	34.04 Discuss signs, symptoms, and potential complications of various hematological disorders and provide appropriate patient education
35.0	**Genitourinary /Renal:** Demonstrate a simple depth, simple breath of knowledge of the assessment and management of genitourinary/ renal emergency patients of all ages. The student will be able to:
	35.01 Review the basic anatomy and physiology of the genitourinary and renal systems.
	35.02 Describe the pathophysiology and signs and symptoms of the following genitourinary/ renal disorders: • Urinary tract infection • Kidney stones • Kidney failure
	35.03 Discuss the basic principles and complications of kidney dialysis.
	35.04 Discuss the recognition and complications of urinary catheters.
	35.05 Describe and demonstrate the assessment and management of the patient with a dialysis emergency. Patients of all ages.
	35.06 Discuss traumatic injuries to the genitourinary system, including, but not limited to: sexual assault (female and male).
36.0	**Gynecology:** Demonstrate a fundamental depth, foundational breadth of knowledge of the assessment and management of gynecologic emergencies patients of all ages. The student will be able to:
	36.01 Review the basic anatomy and physiology of the female reproductive system.
	36.02 Describe the pathophysiology and signs and symptoms of the following gynecologic disorders and emergencies, including but not limited to: • Sexual assault • Non-traumatic vaginal bleeding

		• Menstrual pain • Ovarian cyst • Endometritis • Endometriosis • Pelvic inflammatory disease • Sexually Transmitted Disease
	36.03	Describe and demonstrate the assessment and management of the patient experiencing a gynecologic emergency. Patients of all ages.
	36.04	Describe the assessment and management of a patient who has experienced a sexual assault including the psychosocial impact and assessment findings/presentations.
	36.05	Discuss the professional and psychological importance of maintaining a patient's modesty and privacy while still being able to obtain necessary information.
	36.06	Discuss the need to provide care for a patient of sexual assault, while still preventing destruction of crime scene information.
37.0	**Non-Traumatic Musculoskeletal Disorders:** Demonstrate a fundamental depth, foundational breadth of knowledge of the assessment and management of non-traumatic fractures patients of all ages. The student will be able to:	
	37.01	Review the basic anatomy and physiology of the musculoskeletal system.
	37.02	Describe and demonstrate the assessment and management of the patient in all age groups with a non-traumatic musculoskeletal emergency.
38.0	**Diseases of the Eyes, Ears, Nose, and Throat:** Demonstrate a simple depth, simple breadth of knowledge of assessment and management of diseases of the Eyes, Ears, Nose, and Throat patients of all ages The student will be able to:	
	38.01	Describe and demonstrate the assessment and management of the patient in all age groups with abnormal conditions affecting the eyes, ears, nose and throat, including epistaxis.
39.0	**Shock and Resuscitation:** Demonstrate a fundamental knowledge of the causes, pathophysiology, and management of shock and respiratory failure patients of all ages. The student will be able to:	
	39.01	Discuss and identify causes and pathophysiology of the categories of hemorrhage and shock.
	39.02	Review causes and pathophysiology of respiratory failure and arrest.
	39.03	Review causes and pathophysiology of cardiac failure or arrest.
	39.04	Discuss the various types and degrees of shock.
	39.05	Discuss post resuscitation management.
	39.06	Explain the system components of CPR, the links in the AHA chain of survival and how each relates to patient survival.
	39.07	Define and differentiate between compensated and decompensated shock.
	39.08	Discuss the importance of teamwork in the successful management of the critical patient.

	39.09 Demonstrate how to perform one and two rescuer CPR, adult, child, and infant.
	39.10 Demonstrate how to perform rescuer level appropriate defibrillation in an adult, child, and infant patient.
	39.11 Demonstrate rapid decision making based on differential field diagnosis of the critical patient with a ***special arrest*** peri-arrest condition.
	39.12 Describe and demonstrate the assessment and management of the patient with hemorrhage and shock.
	39.13 Discuss ethical issues in resuscitation.
	39.14 Discuss options for termination resuscitation.
40.0	**Trauma Overview:** Demonstrate a fundamental depth, foundational breadth of knowledge of pathophysiology, assessment and management of the trauma patient patients of all ages. The student will be able to:
	40.01 Discuss pathophysiology of the trauma patient.
	40.02 Discuss the components of a comprehensive trauma systems and levels of trauma centers.
	40.03 Describe the considerations for different transportation modes, ***transport and destination issues*** to a trauma center.
	40.04 Discuss the kinematics of blunt and penetrating trauma.
	40.05 Discuss and describe significant and non-significant Mechanism of Injury (MOI) and provide examples of each.
	40.06 Demonstrate the application of the State of Florida's trauma scorecard methodologies as required in Florida Statute and Florida Administrative Code (F.A.C.).
	40.07 Discuss the National Trauma Triage Protocol of injured Patients.
	40.08 Discuss forming a field impression and utilizing available information to determine a differential diagnosis.
	40.09 Identify the need for rapid intervention transport of the trauma patient.
41.0	**Bleeding:** Demonstrate a fundamental depth, foundational breadth of knowledge of pathophysiology, assessment, and management of bleeding patients of all ages. The student will be able to:
	41.01 Review the anatomy and physiology of the circulatory system.
	41.02 Discuss the different types of bleeding and classes of hemorrhage.
	41.03 Review signs and symptoms of shock (hypo-perfusion).
	41.04 Demonstrate effective hemorrhage control to include application of a tourniquet.
	41.05 Review the pathophysiology of hemorrhagic shock.

	41.06 Recognize the need for rapid transport for patients that are bleeding and showing signs of shock (hypo-perfusion).
	41.07 Describe and demonstrate the assessment and management of a patient with hemorrhagic shock.
	41.08 Discuss the possible complications of an improperly applied dressing, bandage, tourniquet, and hemostatic agents.
42.0	**Chest Trauma:** Demonstrate a fundamental depth, simple breadth of knowledge of pathophysiology, assessment and management of chest trauma patients of all ages. The student will be able to:
	42.01 Review the anatomy and physiology of the thoracic/chest cavity and respiratory system.
	42.02 Differentiate between a pneumothorax (open, simple and tension) and hemothorax.
	42.03 Discuss the pathophysiology, signs and symptoms, and MOI of myocardial injuries, including the following: • Pericardial tamponade • Myocardial contusion • Myocardial rupture • Commotio cordis • Aortic sheerer
	42.04 Discuss the pathophysiology, signs and symptoms, and MOI of specific chest wall injuries, including the following: • Rib fracture • Flail segment • Sternal fracture • Open chest wound • Impaled object
	42.05 Describe and demonstrate the assessment and management of chest trauma ***to include blunt versus penetrating trauma.***
43.0	**Abdominal and Genitourinary Trauma:** Demonstrate a fundamental depth, simple breadth of knowledge of pathophysiology, assessment and management of abdominal and genitourinary trauma patients of all ages. The student will be able to:
	43.01 Review the anatomy and physiology of the abdominal cavity and genitourinary system.
	43.02 Discuss the pathophysiology, signs and symptoms, and MOI for abdominal trauma including *evisceration, impaled objects, blunt versus penetrating mechnaisms*, hollow and solid ***organ*** injuries.
	43.03 Describe and demonstrate the assessment and management of a patient with a suspected abdominal or genitourinary injury/trauma to include internal/external genitalia.
44.0	***Orthopedic Trauma:*** *Demonstrate a fundamental depth, foundational breadth of knowledge of pathophysiology, assessment, and management of orthopedic trauma patients of all ages. The student will be able to:*
	44.01 Review the anatomy and physiology of the Musculo-skeletal system.
	44.02 Discuss pathophysiology, signs and symptoms, and MOI for orthopedic trauma including *evisceration, impaled objects, blunt versus penetrating mechanisms*, h***o***llow and solid ***organ*** injuries.
	44.03 Discuss the different types of orthopedic trauma including fracture classifications. To include:

	• Open fracture • Closed fracture • Dislocation • Upper and Lower extremity orthopedic trauma • Sprains and Strains Pelvic Fracture
44.04	Explain the rationale for stabilization of an injured extremity. To include: • Open fracture • Closed fracture • Dislocation • Upper and Lower extremity orthopedic trauma • Sprains and Strains • Pelvic Fracture
44.05	Describe and demonstrate the assessment and management of a patient with a suspected orthopedic trauma.
44.06	Discuss the following management techniques: • Heat therapy • Cold therapy • Splinting
44.07	List the six “P’s” of orthopedic injury assessment.
44.08	Discuss the need for assessment of distal pulses, motor, and sensation before and after splinting.
44.09	Review age-associated changes in the bones.
44.10	Discuss the proper procedures to package an amputated body part for replantation.
44.11	Explain the rationale for splinting at the scene versus load and go.
44.12	Demonstrate the proper use of various splinting materials and devices to include improvised and traction splints.
45.0	**Soft Tissue Trauma:** Demonstrate a fundamental depth, foundational breadth of knowledge of pathophysiology, assessment, and management of soft tissue trauma patients of all ages. The student will be able to:
45.01	Review anatomy and physiology of the integumentary system to include the layers of the skin.
45.02	Describe the pathophysiology, signs and symptoms, and MOI of soft tissue trauma.
45.03	Describe and demonstrate the assessment and management of various soft tissue injuries. • Wounds (e.g., avulsion, bite, laceration, puncture, and incisions) • Crush and compartment syndrome • High pressure injection injury

45.04	Identify types of burn injuries, including: • Thermal burn • Chemical burn • Electrical burn • Radiation exposure
45.05	Describe the depth classifications of burn injuries, including: • Superficial burn • Partial-thickness burn • Full-thickness burn • Other depth classifications
45.06	Describe and demonstrate methods for determining body surface area percentage of a burn injury including the “rule of nines," the "rule of palms," and other methods.
45.07	Explain how the seriousness of a burn is related to its depth and percent of body surface area (BSA) involved.
45.08	Review the various management techniques for hemorrhage control.
45.09	Differentiate among the types of injuries requiring the use of an occlusive versus non- occlusive dressing.
45.10	Demonstrate the assessment and management of specific burn injuries including: • Thermal • Inhalation • Chemical ***(in the eye and on the skin)*** • Electrical • Radiation
46.0	**Head, Facial, Neck, and Spine Trauma:** Demonstrate a fundamental depth, foundational breadth of knowledge of pathophysiology, assessment, and management of head, facial, neck and spine trauma patients of all ages. The student will be able to:
46.01	Review the anatomy and physiology of the head, face, neck and spine.
46.02	Describe the pathophysiology, signs and symptoms, and MOI for head, face, neck, and spine trauma.
46.03	Describe and demonstrate the assessment and management of a patient with the following traumas to the head, face, neck, and spine: • Penetrating neck trauma • Laryngotracheal injury • Skull fracture • Facial fracture • Eye injury (foreign body) *eyes, globe rupture*) • Dental trauma • Shaken Baby Syndrome • Severe epistaxsis

	46.04 Recognize and manage life threats due to face, head, neck, and spine trauma.
	46.05 Discuss and demonstrate the utilization of the Glasgow Coma Scale.
47.0	**Nervous System Trauma:** Demonstrate a fundamental depth, foundational breadth of knowledge of pathophysiology, assessment, and management of nervous system trauma patients of all ages. The student will be able to:
	47.01 Review the anatomy and physiology of the nervous system.
	47.02 Discuss the pathophysiology, signs and symptoms, and MOI for ***traumatic*** brain ***injury (TBI)*** and spinal cord trauma.
	47.03 Describe and demonstrate the assessment and management of a patient with a ***traumatic*** brain ***injury (TBI)*** and/or spinal cord trauma.
	47.04 Discuss the rationale and potential complications of spinal motion restriction of the entire spine when a cervical spine injury is suspected.
	47.05 Given a scenario, discuss whether or not to remove a helmet prior to transport of a patient.
	47.06 Demonstrate various methods for stabilization and removal of a helmet.
	47.07 Discuss documentation of assessment before, during, and after spinal motion restriction.
48.0	**Special Considerations in Trauma:** Demonstrate a fundamental depth, foundational breadth of knowledge of pathophysiology, assessment and management of trauma patients with special considerations patients of all ages. The student will be able to:
	48.01 Review the anatomy and physiology for the following trauma patients: • Pregnant • Pediatric • Geriatric
	48.02 Discuss the pathophysiology, signs and symptoms, and MOI of trauma in the following patients: • Pregnant • Pediatric • Geriatric
	48.03 Discuss and demonstrate unique assessment and management considerations for the following trauma patients: • Pregnant • Pediatric • Geriatric • Cognitively impaired
49.0	**Environmental Emergencies:** Demonstrate a fundamental depth, foundational breadth of knowledge of pathophysiology, assessment and management of environmental emergencies, patients of all ages. The student will be able to:
	49.01 Define drowning and discuss its incidence, rick factors and prevention.
	49.02 Discuss the pathophysiology, signs and symptoms, and MOI of the following: • Drowning and water related incidents

	• Temperature-related illness • Bites and envenomation • Dysbarism such as high-altitude injuries • Diving injuries • Lightning (electrical) injury • High altitude illness • Radiation exposure • Other environmental emergencies
	49.03 Describes and demonstrate the assessment and management for a patient with the following: • Drowning and water related incidents • Temperature-related illness • Bites and envenomation • Dysbarism such as high-altitude injuries • Diving injuries • Lightning (electrical) injury • High altitude illness • Radiation exposure • Other environmental emergencies
	49.04 Discuss the fundamental principles of the gas laws including Boyle's, Dalton, Henry and Charles.
	49.05 Discuss scene management and provider safety considerations for a variety of environmental emergencies.
	49.06 Explain the five ways a body can lose heat.
	49.07 Discuss potentially life-threatening venomous species of insects, spiders and snakes in the U.S.
50.0	**Multi-Systems Trauma:** Demonstrate a fundamental depth, foundational breadth of knowledge of the pathophysiology, assessment, and management of multi-system trauma and blast injuries, patients of all ages. The student will be able to:
	50.01 Discuss the pathophysiology, signs and symptoms, and MOI of multi-system trauma and blast injuries.
	50.02 Describe and demonstrate assessment and management considerations for a patient of multi system trauma and blast injuries.
	50.03 Describe and demonstrate assessment and management considerations for a patient of multi system trauma and blast injuries.
	50.04 Formulate a field impression based upon the assessment findings for a patient with multi systems trauma and/ or blast injuries
51.0	**Obstetrics:** Demonstrate a fundamental depth, foundational breadth of management of the obstetric patient within the scope of practice of the EMT. The student will be able to:
	51.01 Identify and describe the anatomical and the physiological changes during pregnancy.
	51.02 Define the stages of labor and discuss how to assess them.

	51.03 Differentiate between cephalic and abnormal delivery.
	51.04 Describe the management of a patient with pre-delivery emergencies.
	51.05 Discuss and demonstrate the patient care measures for all stages of labor in a cephalic delivery for the mother and the newborn.
	51.06 Describe the management of the mother post-delivery.
	51.07 Discuss and demonstrate the patient care measures for all stages of labor in abnormal deliveries for the mother and the newborn.
	51.08 Describe the procedures for handling complications of delivery.
	51.09 Describe special considerations when meconium is present in amniotic fluid or during delivery.
	51.10 Identify the factors that lead to premature birth and low birth weight newborns.
	51.11 Demonstrate the procedures for handling complications of pregnancy including pre-eclampsia, eclampsia, and high risk.
52.0	**Neonatal Care:** Demonstrate a fundamental depth, foundational breadth of knowledge of management of the newborn and neonatal patient within the scope of practice of the EMT. The student will be able to:
	52.01 Discuss and demonstrate assessment and management considerations of a neonate.
	52.02 Define the term neonate.
	52.03 Describe special patient care considerations of a premature baby.
	52.04 Calculate the Apgar score given various newborn situations.
	52.05 Discuss the common signs when ventilarory assistance is appropriate for a neonate.
	52.06 Discuss and demonstrate the steps in resuscitation of a neonate.
	52.07 Review the signs of hypovolemia in a newborn.
	52.08 Discuss the effects maternal narcotic usage has on the newborn.
	52.09 Discuss the management/treatment plan for vomiting in the neonate.
	52.10 Discuss the assessment findings associated with common birth injuries in the neonate.
53.0	**Pediatrics:** Demonstrate a fundamental depth, fundamental breath of knowledge of management of the pediatric patient within the scope of practice of the EMT. The student will be able to:
	53.01 Review the anatomy, physiology and pathophysiology differences of patients.

	53.02 Discuss the differences in approaching and assessing patients.
	53.03 Discuss and demonstrate assessment and management considerations for Sudden Unexplained Infant Death Syndrome (SUIDS).
	53.04 Describe the selection of appropriate airway adjuncts and ventilation devices.
	53.05 Discuss complications of improper utilization of airway adjuncts and ventilation devices.
	53.06 Describe the common causes, assessment and management of respiratory distress, failure, or arrest.
	53.07 Discuss the common causes, assessment and management of hypo-perfusion.
	53.08 Discuss the common causes, assessment and management of cardiopulmonary arrest.
	53.09 Describe the common causes, assessment and management of altered level of consciousness.
	53.10 Describe the common causes, assessment and management of trauma.
	53.11 Describe the common causes, assessment and management of neurological emergencies.
	53.12 Demonstrate proper technique for administering blow-by oxygen.
	53.13 Review proper technique for suctioning.
	53.14 Review appropriate use of airway adjuncts and ventilation devices.
	53.15 Review age-appropriate basic airway clearing maneuvers for a completely obstructed airway.
54.0	**Geriatrics:** Demonstrate a fundamental depth, foundational breadth of knowledge of management of the geriatric patient within the scope of practice of the EMT. The student will be able to:
	54.01 Define and discuss the term geriatrics.
	54.02 Review the anatomy, physiology and pathophysiology of the geriatric patient.
	54.03 Discuss common emotional and psychological concerns and conditions of the geriatric patient.
	54.04 Discuss the importance of fall prevention with the geriatric patient.
	54.05 Describe principles that should be employed when assessing and communicating with the geriatric patient.
	54.06 Describe the common causes, assessment, and management of the geriatric patient with a medical, trauma, or psychosocial complaint.
55.0	**Patients with Special Challenges:** Demonstrate a simple depth, simple breadth of knowledge of the management of the patient with special challenges patients of all ages. The student will be able to:

	55.01 Discuss the special considerations required when providing emergency care to patients with: • Abuse/neglect of vulnerable populations • Homelessness • Poverty • Bariatrics • Tech dependent • Hospice/terminally ill • Tracheostomy • Home care • Sensory deficit/loss • Developmental disability
	55.02 Discuss special considerations regarding common medical devices used in the home care of patients with special challenges including: • Respiratory devices • Cardiac devices • Gastro-urinary devices • Central & peripheral IV catheters
	55.03 Describe home care and the types of patients it serves and the services it encompasses.
	55.04 Differentiate between hospice/palliative care and curative care.
	55.05 Discuss the role of the EMT as a patient advocate for vulnerable populations.
56.0	**Principles of Safely Operating a Ground Ambulance:** Demonstrate a simple depth, foundational breadth of knowledge of risks and responsibilities of transport. The student will be able to:
	56.01 Discuss the importance of performing regular vehicle and equipment inspection.
	56.02 Demonstrate how to perform a daily inspection of an ambulance.
	56.03 Review the general provisions of Florida laws relating to the operation of the ambulance.
	56.04 Discuss the guidelines for operating an ambulance safety during emergency and non-emergency situation/incident.
	56.05 Review considerations that are required for ensuring scene safety, including personal safety, patient safety, and traffic control.
	56.06 Review how to clean and disinfect the ambulance and equipment.
57.0	**Incident Management:** Demonstrate a fundamental depth, fundamental breadth of knowledge of establishing and working within the incident management system. The student will be able to:
	57.01 Discuss the importance of NIMS (National Incidence Management System) and its functional components.

	57.02 Discuss unified command and when it is applicable.
	57.03 Describe the role of command and the procedures for transfer of command.
	57.04 List and describe the functions of the following groups and leaders in ICS as it pertains to EMS incidents: • Safety • Logistics • Rehabilitation • Staging, • Treatment • Triage • Transportation • Extrication/rescue • Morgue • Communications
	57.05 Discuss the physical and psychological signs of critical incident stress.
58.0	**Multiple Casualty Incidents:** Demonstrate a simple depth, foundational breadth of knowledge of responding to an emergency during a multiple casualty incident. The student will be able to:
	58.01 Review essential elements of scene size-up when arriving at a potential MCI.
	58.02 Describe the role of the rescuers and EMS systems in planning for MCIs and disasters.
	58.03 Describe the role of the physician at multiple casualty incidents.
	58.04 Define triage and describe the principles of triage.
	58.05 Describe the START (simple triage and rapid treatment) and JUMP START method of initial triage.
	58.06 Describe techniques used to allocate patients to hospitals and track them.
	58.07 Discuss and describe the essential equipment to provide logistical support to MCI operations.
	58.08 Describe the role of critical incident stress management during and after MCIs.
	58.09 Demonstrate the use of local/regional triage tagging system.
59.0	**Air Medical:** Demonstrate a simple depth, simple breadth of knowledge of safe air medical operations and criteria for utilizing air medical response. The student will be able to:
	59.01 Describe key scene safety considerations when preparing for a helicopter medivac, including establishing a landing zone and approaching the aircraft.
	59.02 Describe the capabilities, protocols, and methods for accessing air medical transport.

	59.03 Review the advantages and disadvantages of air medical transport.
	59.04 Review the conditions/situations in which air medical transport should be considered.
60.0	**Vehicle Extrication:** Demonstrate a simple depth, simple breadth of knowledge for safe vehicle extrication and use of simple hand tools. The student will be able to:
	60.01 Describe the role of the EMT in patient rescue and vehicle extrication
	60.02 Describe personal and patient safety during vehicle extrication.
	60.03 Explain the difference between simple access and complex access in vehicle extrication.
	60.04 Discuss patient care considerations related to assisting with rapid extrication, providing emergency care to the trapped patient and removing and transferring a patient.
	60.05 Discuss the use of simple hand tools used for vehicle extrication.
	60.06 Discuss and describe the hazards and safe practices associated with the following vehicle components: • Energy absorbing bumpers • Air bag/supplemental restraint systems • Catalytic converters and conventional fuel systems • Stored energy • Hybrid-electric vehicles
	60.07 Describe methods for emergency stabilization using rope, cribbing, jacks, spare tire, and come-a-longs for vehicles.
	60.08 Describe the electrical hazards commonly found at highway incidents (above and below ground).
	60.09 Explain the difference between tempered and safety glass, identify its locations on a vehicle and how to break it safely.
	60.10 Explain typical door anatomy and methods to gain access to the patient.
61.0	**Hazardous Materials Awareness:** Demonstrate a simple depth, simple breadth of knowledge of risks and responsibilities of operating in a cold zone at a hazardous material or other special incident. The student will be able to:
	61.01 Identify and describe resources for substance identification, decontamination, and treatment information, including but not limited to the following: • Poison control center • Medical control • Material safety data sheets (MSDS), • Reference textbooks • Computer databases • Computer-Aided Management of Emergency Operations (CAMEO) • CHEMTREC • Technical specialists

	• Agency for toxic substances and disease registry
61.02	Explain primary and secondary contamination risk.
61.03	Review routes of exposure.
61.04	Discuss how the substance and route of contamination alters triage and decontamination methods.
61.05	Explain the common signs, symptoms, and treatment for the following substances: • Corrosives • Pesticides • Chemical asphyxiants • Hydrocarbon solvents
61.06	Identify local facilities and resources capable of treating patients exposed to hazardous materials.
61.07	Determine the appropriate level of PPE by considering the following: • Types • Application • Use and limitations • Use of chemical compatibility chart
61.08	Explain specific decontamination procedures.
61.09	Discuss the designated HAZMAT control zones (HOT, WARM, and COLD).
61.10	Discuss an emergency two-step decontamination process.
61.11	Identify DOT Labels, placards and markings that are used to designate HAZMAT materials.
61.12	Demonstrate the ability to use a variety of reference materials to identify a HAZMAT material.
62.0	**Mass Casualty Incidents Due to Terrorism and Disaster:** Demonstrate a simple depth, simple breadth of knowledge of risks and responsibilities of operating on the scene of a natural or man-made disaster. The student will be able to:
62.01	Describe the role of the EMT on the scene of a natural or man-made disaster.
62.02	Define the different types of terrorism and provide examples of incidents of each.
62.03	Describe the factors related to ensuring situational safety at the site of a disaster and the procedures required.
62.04	Discuss the National Terrorism Advisory System.
62.05	Discuss factors to consider when responding to a terrorist situation.
62.06	Review important actions to take at the scene of a terrorist event such as:

	• Scene safety • Personal protection • Notification procedures • Available resources • Working with in the command system
62.07	List and describe the main categories of weapons of mass destruction.
62.08	Discuss the different types of chemical agents and their signs and symptoms.
62.09	Review the treatment and management of patients exposed to various types of chemical agents and radiation.
62.10	Review the different types of radiations and their effect on the human body.
62.11	Discuss the use of a nerve agent antidote kit.

Florida Department of Education
Student Performance Standards

Program Title: **Emergency Medical Technician –ATD**
ATD CIP Number: **0351090408**

When this program is offered at the college level, the following standards and benchmarks apply:

01.0	**EMS Systems:** Demonstrate a simple depth, foundational breadth of knowledge of EMS systems. The student will be able to:
01.01	Define Emergency Medical Services (EMS) systems.
01.02	Discuss the historical background of the development of the EMS system.
01.03	Identify the four levels of national EMS providers (EMR, EMT, AEMT and PM) as well as the three levels (EMR, EMT, and PM) in the State of Florida.
01.04	Discuss the specific statutes and regulations regarding the EMS system in Florida.
01.05	Discuss vehicle and equipment readiness.
01.06	Characterize the EMS system's role in prevention and public education.
01.07	Systems of care, e.g., Stroke, STEMI, Trauma, Pediatrics (S, F).
01.08	MIH/CP and other EMS-related specialty roles (S, S).
01.09	Discuss the roles and responsibilities of the EMT related to personal safety of the crew, patient and by standers.
01.10	Discuss the roles and responsibilities of the EMT to operate emergency vehicles, provide scene leadership and perform patient assessment and administer emergency care.
01.11	Discuss the maintenance of and differences between certification and licensure for the EMS professional in the State of Florida and NREMT.
01.12	Define quality improvement and discuss the EMT's role in the process.
01.13	Quality improvement vs. quality assurance (S, F).
01.14	Role of medical oversight (S, S).
01.15	Culture of safety.
01.16	Patient safety (SF)
01.17	Identify the basics of common methods of payment for healthcare services.

	01.18 Analyze attributes and attitudes of an effective leader.
	01.19 Demonstrate effective techniques for managing team conflict.
	01.20 Describe factors that influence the current delivery system of healthcare.
	01.21 Discuss the importance of continuing medical education and skills retention.
	01.22 Continuum of care (S, F).
	01.23 Assess personal attitudes and demeanor that may distract from professionalism.
	01.24 Serve as a role model and exhibit professional behaviors in the following areas: • Integrity • Empathy • Self-motivation • Appearance and personal hygiene • Self-confidence • Communications (including phone, email and social media etiquette) • Time management • Teamwork and diplomacy • Respect • Patient advocacy (inclusive of those with special needs, alternate lifestyles and cultural diversity) • Careful delivery of service
02.0	**Research:** Demonstrate a simple depth, simple breadth of knowledge of research and evidence-based decision making. The student will be able to:
	02.01 Discuss EMS research and evidence-based decision making • Conduct scientific literature searches • Read, interpret, and extract information from journal articles relevant to a project
	02.02 Explain the importance of assessing and treating patients based on evidence-based decision-making.
	02.03 Interpret graphs, charts, and tables.
	02.04 Measure time, temperature, distance, capacity, and mass/weight.
	02.05 Convert and use traditional and metric units.
	02.06 Make estimations, approximations and judge the reasonableness of the result.
	02.07 Convert time from a 12-hour format to a 24-hour format
	02.08 Demonstrate ability to evaluate and draw conclusions.

	02.09 Calculate ratios.
	02.10 Explain the rationale for the EMS system gathering data.
	02.11 Impact of research on EMT care (S, S).
	02.12 Data collection (S, S).
	02.13 Evidence-based decision making (S,S).
03.0	**Workforce Safety and Wellness:** Demonstrate a fundamental depth, foundational breadth of knowledge of workforce safety and wellness. The student will be able to:
	03.01 Explain the need to determine scene safety.
	03.02 Discuss the importance of body substance isolation (BSI).
	03.03 Describe the steps and equipment the EMT should take for personal protection from airborne and blood borne pathogens and communicable disease.
	03.04 List possible emotional reactions that an individual (EMT and EMT family, Patient and Patient family) may experience when faced with trauma, illness, death and dying.
	03.05 Discuss the steps the EMT should take when approaching a family confronted with death and dying.
	03.06 Recognize the warning signs of personal stress and discuss the strategies and resources available for EMTs to utilize.
	03.07 Demonstrate good body mechanics while using a stretcher and other patient moving devices.
	03.08 Discuss the guidelines and safety precautions to be followed when lifting and moving patients and equipment.
	03.09 Discuss patient positioning in common emergency situations.
	03.10 Discuss situation that may require the use of medical restraints on the patient and explain guidelines and safety consideration for their use.
	03.11 Define “infectious disease” and “communicable disease.”
	03.12 Disease transmission (F, F).
	03.13 Describe the routes of transmission and associated risks for infectious disease.
	03.14 Explain the mode of transmission and the steps to prevent/deal with an exposure of hepatitis, meningitis, tuberculosis and HIV.
	03.15 Explain how immunity to infectious diseases is acquired.
	03.16 Explain post exposure management of exposure to patient blood or body fluids, including proper notification documentation.

	03.17 Describe the components of physical fitness and mental wellbeing.
	03.18 Identify personal health practices and environmental factors which affect physical, mental, and emotional wellbeing.
	03.19 Prevention of work-related injuries and illnesses (F, F).
	03.20 Responder mental health, resilience and suicide prevention (F, F).
	03.21 Wellness principles (F, F).
	03.22 Discuss complementary and alternative health practices.
	03.23 Explain the basic concepts of positive self-image, wellness and stress.
	03.24 Discuss the need for a wellness and stress control plan that can be used in personal and professional life.
	03.25 Explore the importance of adequate nutrition (i.e. U.S. Department of Agriculture's MyPlate food guide (www.choosemyplate.gov)).
	03.26 Demonstrate safe behaviors in the proper use of medical equipment.
	03.27 Explain the theory of root- cause analysis.
	03.28 Identify and describe methods in medical error reduction and prevention in the various healthcare settings.
	03.29 Identify and practice security procedures for medical supplies and equipment in various healthcare settings.
	03.30 Describe fire, safety, disaster and evacuation procedures in the various healthcare settings.
	03.31 Discuss applicable accrediting and regulatory agency patient safety guidelines.
04.0	**Documentation:** Demonstrate a fundamental depth, foundational breadth of knowledge of the principles of medical documentation and report writing. The student will be able to:
	04.01 Discuss applications of technology in healthcare.
	04.02 Demonstrate basic computer skills.
	04.03 Interpret and utilize information from electronic health records.
	04.04 Identify methods of electronic communication to access and distribute data.
	04.05 Describe the use and importance of properly written communication and patient care documentation.
	04.06 Explain the legal implication of the patient care report.
	04.07 Supporting medical necessity (S,S).

	04.08 Identify the minimum dataset reference patient information and administrative information on the patient care report.
	04.09 Understand how to document refusal of care, including legal implications.
	04.10 Discuss the implications of the Health Insurance Portability and Accountability Act of 1996 on confidential documentation.
	04.11 Describe the special considerations concerning mass casualty incident documentation.
	04.12 Demonstrate completion of a patient care report for a medical and trauma patient.
05.0	**EMS System Communication:** Demonstrate a simple depth, simple breadth of knowledge of the EMS communication system, communication with other health care professionals, and team communication. The student will be able to:
	05.01 Understand the basic principles of the various types of communications equipment used in EMS.
	05.02 Describe the use of radio communication and correct radio procedures, including the proper methods of initiating and terminating the radio call/transmission.
	05.03 Explain the rationale for providing efficient and effective radio communications and patient reports.
	05.04 Identify the essential components of the verbal report and legal aspects that need to be considered.
	05.05 Perform an organized and concise radio transmission.
	05.06 Team communication and dynamics (S,S).
	05.07 Perform an organized, concise verbal patient report that would be given to the staff at a receiving facility.
	05.08 Perform a brief, organized verbal report that would be given during transfer of care at an incident scene.
06.0	**Therapeutic Communication:** Demonstrate a simple depth, simple breadth of knowledge of the principles of therapeutic communication. The student will be able to:
	06.01 Describe principles of therapeutic and effective communication with patients.
	06.02 Health care literacy (S, S).
	06.03 Non-discriminatory communication that addresses inherent or unconscious bias, is culturally aware and sensitive, and intended to improve patient outcome (S, S).
	06.04 Discuss basic speaking and active listening skills.
	06.05 Recognize the importance of patient/client education regarding healthcare.
	06.06 Discuss the adjustment of communication strategies to effectively communicate with patients with: • Differing age groups • Differing developmental stages • Special needs

	• Differing cultures, including language barriers
	06.07 Discuss the communication techniques that should be used to interact with the patient, patient family, bystanders, and individuals from other agencies including verbal diffusion and interview techniques.
	06.08 Discuss the strategies for interviewing persons in special situations.
	06.09 Distinguish between and respond to verbal and non-verbal cues.
	06.10 Analyze elements of communication using a sender-receiver/close loop model.
	06.11 Exhibit positive non-verbal behaviors.
	06.12 Establish proper patient rapport.
07.0	**Medical/Legal and Ethics:** Demonstrate a fundamental depth, foundational breadth of knowledge of medical legality and ethics. The student will be able to:
	07.01 Discuss the rational, importance, and limitations of patient autonomy.
	07.02 Differentiate between expressed, implied and involuntary consent.
	07.03 Discuss the methods of obtaining consent and procedures for minors.
	07.04 Discuss the issues of abandonment, negligence, false imprisonment and battery and their implications to the EMT.
	07.05 Discuss the implications for the EMT in patient refusal of care and/or transport.
	07.06 Explain the importance, necessity and legality of patient confidentiality.
	07.07 Discuss the importance of Do Not Resuscitate [DNR] (advance directives) and local or Florida provisions regarding EMS application.
	07.08 Patient rights/advocacy (S, S).
	07.09 Discuss State of Florida and Federal special reporting situations including: • Abuse • Sexual assault • Gunshot and knife wounds • Communicable disease • Animal Bites
	07.10 Differentiate between civil tort and criminal actions.
	07.11 Discuss the elements of negligence and defenses/protections from liability.
	07.12 Discuss the role of the EMT at crime scenes and preservation of evidence.

	07.13 Define ethics and morality and discuss their implication for the EMT.
	07.14 Discuss Florida legislation such as: • Baker Act (FS 394.451) • Marchman Act (FS 397.601 and FS 397.675) • Emergency Examination and Treatment of Incapacitated Persons Act (FS 401.445)
	07.15 Differentiate between the scope of practice and the standard of care as applied to the EMT.
	07.16 Discuss the legal concepts and limitations of immunity, including Good Samaritan statutes and governmental immunity.
	07.17 Describe the appropriate patient management and care techniques in a refusal of care situation.
	07.18 Analyze the relationship between the law, morals and ethics in EMS and the premise that should under lie the EMTs ethical decisions.
	07.19 Describe the criteria necessary to honor an advance directive.
	07.20 Explain the rationale for the needs, benefits and varying degrees of advance directives.
08.0	**Anatomy and Physiology**: Demonstrate a fundamental knowledge of the anatomy and function of all human systems to the practice of EMS. The student will be able to:
	08.01 Identify the following topographic terms: • Medial • Lateral • Proximal • Distal • Superior • Inferior • Anterior • Posterior • Midline • Right and left • Mid-clavicular • Bilateral • Mid-axillary
	08.02 Describe the life support chain, aerobic metabolism, and anaerobic metabolism.
	08.03 Define anatomy, physiology, pathophysiology, and homeostasis.
	08.04 Identify and describe the anatomical structures and functions of the following: • Skeletal system • Muscular system

• Respiratory system • Circulatory/Cardiovascular system • Nervous system • Integumentary system • Digestive system • Endocrine system • Renal system • Reproductive system • Lymphatic system
08.05 Explain cellular anatomy and physiology.
08.06 Explain cellular respiration.
08.07 Discuss cell division.
08.08 Describe the different types of muscle tissues including skeletal, smooth and cardiac.
08.09 Name and identify the location of the bones of the axial and appendicular skeleton.
08.10 Describe the classification and types of joints.
08.11 Discuss the mechanisms of breathing including: • mechanical ventilation • pulmonary volumes • dead space • lung compliance
08.12 Explain the diffusion of gases in external and internal respiration.
08.13 Describe oxygen and carbon dioxide transport in the blood.
08.14 Describe nervous and chemical mechanisms that regulate respirations.
08.15 Discuss respiration and acid-base balance.
08.16 Discuss the hemodynamics of blood pressure.
08.17 Discuss the role of nutrition, metabolism and body temperature on body function.
08.18 Describe the causes, advantages, and disadvantages of a fever.
08.19 Discuss the hypothalamus functions as the thermostat in the body.

09.0	**Medical Terminology:** Demonstrate a fundamental knowledge in the use of medical terminology. The student will be able to:
	09.01 Identify medical terminology word parts such as: • Root words • Prefixes • Suffixes • Combining forms
	09.02 Correctly utilize medical terminology describing each of the following: • Body structures • Functions • Conditions and disorders • Body regions • Cavities • Areas • Landmarks
	09.03 Correctly use medical abbreviations and symbols.
	09.04 Read and understand basic medical documentation in medical records and medical reports.
	09.05 Communicate with healthcare professionals utilizing basic medical terminology.
	09.06 Explain the rationale for using accepted medical terminology correctly.
10.0	**Pathophysiology:** Demonstrate a fundamental knowledge of the causes and pathophysiology of shock and the components of resuscitation. The student will be able to:
	10.01 Discuss signs of irreversible death.
	10.02 Review the anatomy and physiology of the respiratory and cardiovascular systems.
	10.03 Discuss and identify the pathophysiology of respiratory failure and respiratory and cardiac arrest.
	10.04 Understand shock, including pathophysiology, causes, and the signs and symptoms associated with the various types of shock.
	10.05 Discuss the variations in the pathophysiology of shock patients of all ages.
11.0	**Life Span Development:** Demonstrate a fundamental knowledge of life span development to patient assessment and management. The student will be able to:
	11.01 Describe the major physiologic and psychosocial characteristics patients of all ages.
12.0	**Public Health:** Demonstrate a simple knowledge of the principles of illness and injury prevention in emergency care. The student will be able to:

	12.01 Define public health and explain the goal of the public health field.
	12.02 Identify the EMS role within the public health field.
	12.03 Discuss basic concepts of epidemiology.
	12.04 Discuss ways of EMS involvement in injury prevention.
	12.05 Identify areas of need for prevention programs in the community.
13.0	**Principles of Pharmacology:** Demonstrate a simple depth, simple breadth of knowledge of pharmacology, medication safety, and medication types used during an emergency. The student will be able to:
	13.01 Explain the "rights" of medication administration and describe how each one related to EMS.
	13.02 Discuss and differentiate the various medication forms and the appropriate routes of administration
	13.03 Describe the difference between a generic medication name and trade name and provide an example of each.
	13.04 Specific medication classes to be determined locally • Class names (S, S) • Class indications (S, S) • Class complications (S, S) • Class side effects (S, S) • Polypharmacy (S, S)
	13.05 Discuss the components and elements of a drug profile including: • Class • Actions • Contraindications • Side effects • Dose • Route • Adverse drug reactions (S, S) • Medication response relationships (F,F)
	13.06 Describe the role of medical direction in medication administration and explain the difference between direct orders (online) and standing orders (off-line).
14.0	**Pharmacology:** Demonstrate a fundamental depth, simple breadth of knowledge of emergency medications within the scope of practice of the EMT. The student will be able to:
	14.01 State the following for each medication that can be administered by an EMT as dictated by the State of Florida and local medical direction: • Medication safety • Medication legislation

	• Naming • Classifications • Storage and security • Medication interactions • Adverse drug reactions • Metabolism and excretion • Mechanism of action • Medication response relationships
14.02	State the following for each medication that can be administered by an EMT as dictated by the State of Florida and local medical direction (Acute Medications): • Generic / Trade Names, Drug Classifications • Effects • Actions • Indication • Contraindications • Complications • Routes of administration • Side effects • Interactions • Doses of medications
14.03	Demonstrate the steps in properly inspecting each type of medication. (Medication Administration) • Use a Medication Cross Check procedure • Use an autoinjector • Use a unit-dose, premeasured intranasal device • Administer medications to a patient • Provide pain management, including ethical and safety considerations • Routes of administration
14.04	Discuss the difference between administration versus assistance of patient medications. (Chronic or Maintenance Medications) • Class names • Class indications • Class complications • Class side effects • Polypharmacy
15.0	**Respirations:** Demonstrate a fundamental depth, foundational breadth of knowledge of respiration. The student will be able to:
15.01	Anatomy of the Respiratory System and review the pulmonary ventilation process to include mechanics of ventilation and alveolar ventilation (tidal volumes, dead space, etc.): • Control of respirations

	• Mechanics of respiration • Pulmonary ventilation • Oxygenation • Mechanical ventilation
15.02	Physiology and pathophysiology of respiration • Pulmonary ventilation • Oxygenation • Respiration • External • Internal • Cellular
15.03	Demonstrate the correct operation of oxygen tanks and regulators.
15.04	Describe the following regarding supplemental oxygen delivery devices: • Indications • Contraindications • Advantages • Disadvantages • Complications • Liter flow range • Concentration of delivered oxygen • Procedures • Purpose • Components
15.05	Demonstrate the use of low, medium, high, and variable concentration oxygen delivery devices for all age groups.
15.06	Describe assessment and management for adequate and inadequate respiration, including the use of pulse oximetry and capnography.
15.07	Explain the rationale for providing adequate oxygenation through high inspired oxygen concentrations to patients who, in the past, may have received low concentrations.
15.08	Discuss the use of an oxygen humidifier and the requirements needed for its use.
15.09	Discuss the differences between negative pressure and positive pressure ventilation.
16.0	**Airway Management:** Demonstrate a fundamental depth, foundational breadth of knowledge of airway management patients of all ages within the scope of practice of the EMT. The student will be able to:
16.01	Review the structures and functions of the Anatomy of the Airway and the Respiratory System (Include age- related variations in pediatric and geriatric patients). • Normal • Abnormal

	• Special Considerations (MDI, In-Line Neb, Simple Face Mask, Venturi, CPAP/BiPAP)
16.02	Describe appropriate assessment of the airway and the management for a patient with or without adequate breathing (Include age-related variations in pediatric and geriatric patients).
16.03	Describe the Techniques of assuring a patent airway, indications for airway management, and demonstrate the steps in performing the head-tilt chin-lift and jaw thrust in all age groups (Include age- related variations in pediatric and geriatric patients). • Demonstrate the techniques of suctioning. • Demonstrate relief of FBAO. • Demonstrate how to insert an oral and nasal -airway adjunct. • Demonstrate how to insert both esophageal and supra-glottic airways.
17.0	**Artificial Ventilations:** Demonstrate a fundamental depth, foundational breadth of knowledge of assessment and management utilizing ventilation patients of all ages. The student will be able to:
17.01	Effect of ventilation on cardiac output • E.g., Bag Valve Mask, Ventilator, CPAP, Hyper Mechanical Inflation
17.02	Demonstrate how to ventilate a patient with a pocket mask.
17.03	Demonstrate the safe and effective ventilation for a patient with a BVM for one or two rescuers using oral-nasal adjuncts with appropriate airway positioning.
17.04	Discuss the signs of adequate and inadequate ventilation using the BVM.
17.05	Describe the steps involved in performing a comprehensive assessment of ventilations.
17.06	Demonstrate how to ventilate a patient with a stoma.
01.02	Demonstrate the use of various devices used in the assessment of supra-glottic airway placement.
17.07	Describe the following for a patient with an automatic transport ventilator (ATV): • Indications • Contraindications • Advantages • Disadvantages • Complications • Technique for ventilating
17.08	Describe the following for a patient with a CPAP: • Indications • Contraindications • Advantages • Disadvantages • Complications • Technique for ventilating

18.0	**Scene Size-Up:** Demonstrate a fundamental depth, foundational breadth of knowledge of scene management and multiple patient situations**.** The student will be able to:
18.01	Recognize and describe hazards/potential hazards at the scene.
18.02	Discuss common mechanisms of injury/nature of illness.
18.03	Discuss the priority considerations for multiple-patient situations.
18.04	Explain why it is important for the EMT to anticipate and determine the need of appropriate Scene management including but not limited to traffic incident management, additional resources, or specialty resources.
18.05	Discuss the importance of continuous scene assessment to ensure safety of the EMS Impact of the environment on team and the patient care.
18.06	Explain why it is important for the EMT to anticipate and determine the need for additional or specialized resources.
18.07	Discuss the importance of continuous scene assessment to ensure safety of the EMS team and the patient.
18.08	Discuss the minimum standard precautions that should be followed and PPE that should be worn as appropriate.
18.09	Discuss special considerations for dealing with a violent scene.
18.10	Explain the rationale for crew members to evaluate scene safety prior to entering.
18.11	Explain how patient situations affect your evaluation of mechanism of injury or illness.
19.0	**Primary Assessment:** Demonstrate a fundamental depth, simple breadth of knowledge of the primary assessment for all patient situations. The student will be able to:
19.01	Summarize the elements of a general impression of the patient.
19.02	Explain the reason for performing a primary assessment.
19.03	Discuss and demonstrate methods of assessing level of responsiveness using AVPU.
19.04	Discuss and demonstrate methods of assessing the airway and providing airway care patients of all ages.
19.05	Describe and demonstrate methods used for assessing if a patient is breathing patients of all ages.
19.06	Differentiate between a patient with adequate and inadequate breathing.
19.07	Describe and demonstrate the methods used to obtain a pulse patients of all ages.
19.08	Discuss and demonstrate assessing the patient for external bleeding.
19.09	Describe and demonstrate the assessment and interpretation of skin color, temperature, moisture and capillary refill patients of all ages.

	19.10 Explain the reasons prioritizing a patient for care and transport.
	19.11 Describe when it is appropriate to expose the patient completely.
	19.12 Differentiate between critical life-threatening, potentially life- threatening, and non-life-threatening patient presentations.
20.0	**History-Taking:** Demonstrate a fundamental depth, foundational breadth of knowledge of the components of history taking. The student will be able to:
	20.01 Determine and investigate the chief complaint (MOI/NOI).
	20.02 Describe components of the patient history.
	20.03 Explain the importance of obtaining a SAMPLE and OPQRST history.
	20.04 Acknowledge the feelings patients experience during assessment.
	20.05 Discuss the value of obtaining a family and social history.
	20.06 Describe examples of different techniques the EMT may use to obtain information from patients, family or bystanders during the history taking process.
21.0	**Secondary Assessment:** Demonstrate a fundamental depth, foundational breadth of knowledge of techniques used for a secondary assessment. The student will be able to:
	21.01 Discuss the components and techniques of the physical exam and skills involved.
	21.02 Discuss the indications for performing: • Rapid assessment • Focused exam • Head to toe exam
	21.03 Demonstrate: • Rapid exam • Focused exam • Head to toe exam
	21.04 Describe and demonstrate the techniques of inspection, palpation, percussion, and auscultation. • Respiratory system including breath sound quality • Cardiovascular system • Neurological system • Musculoskeletal system • Major anatomical regions
	21.05 Describe and demonstrate the importance of obtaining a baseline set of vital signs. • E.g., Non-Invasive Blood Pressure, Blood Glucose, Temperature …
	21.06 Discuss blood pressure ranges patients of all ages.

22.0	**Monitoring Devices:** Demonstrate a simple depth, simple breath of knowledge of monitoring devices within the scope of practice of the EMT. The student will be able to:
	22.01 Describe and demonstrate the purpose, indications, procedure, normal findings, and limitations of the following patient monitoring technologies. • Pulse oximetry • Glucometry • Capnography • Noninvasive BP monitoring • Thermometry • Telemetry • Cardiac monitoring – 12 lead ECG acquisition and transmission
	22.02 Demonstrate proper placement of a cardiac monitor and diagnostic ECG leads.
23.0	**Reassessment:** Demonstrate a fundamental depth, foundational breadth of knowledge of how and when to perform a reassessment for all patient situations. The student will be able to:
	23.01 Describe the components of reassessment and demonstrate the skills involved.
	23.02 Discuss the reasons for repeating the primary assessment as part of the reassessment.
	23.03 Explain trending assessment components and its value to other health professionals who assume care of the patient.
	23.04 Demonstrate the reassessment of patients of all ages.
24.0	**Medical Overview:** Demonstrate a simple depth, foundation breadth of knowledge of pathophysiology, assessment and management of medical complaints. The student will be able to:
	24.01 Pathophysiology, assessment, and management of a medical complaints to include • Identify factors that affect the patient Transport Decision and Medically Appropriate Destination • E.g., Scene Safety, Environmental Factors, Chief Complaint, Preconceptions.
	24.02 Discuss forming a field impression and utilizing available information to determine a differential diagnosis.
25.0	**Neurology:** Demonstrate a fundamental depth, foundational breadth of knowledge of the assessment and management of neurologic disorders/emergencies patients of all ages. The student will be able to:
	25.01 Review the anatomy and physiology of the nervous system.
	25.02 Describe the pathophysiology of the following neurologic disorders: • Altered mental status • Stroke • Transient ischemic attack • Headache • Seizures • Syncope

		• Dementia vs. delirium • Alzheimer's disease • Headache • Brief Resolved Unexplained Event (BRUE) • Other neurological disorders to be determined locally
	25.03	Discuss and identify the causes, signs and symptoms of ischemic strokes, hemorrhagic strokes, and transient ischemic attacks and their similarities and differences.
	25.04	Discuss and demonstrate how to use a stroke scoring system in the assessment of patients with suspected stroke.
	25.05	Define and differentiate generalize seizure, partial seizure and status epilepticus and list their possible causes.
	25.06	Define and differentiate migraine headache, sinus headache, tension headache and discuss how to distinguish harmless headaches from something more serious.
	25.07	Define "altered mental status" and identify the possible causes.
	25.08	Describe and demonstrate the assessment and management of the patient with various neurological emergencies in patients of all ages to include: • Strokes • Headaches • Seizures • Altered mental status
	25.09	Discuss the transport of the stroke patient to the appropriate treatment center.
26.0	**Abdominal and Gastrointestinal Disorder:** Demonstrate a fundamental depth, foundational breadth of knowledge of the assessment and management of abdominal and gastrointestinal disorders/emergencies patients of all ages. The student will be able to:	
	26.01	Review the basic anatomy and physiology the gastrointestinal, genital and urinary systems.
	26.02	Define and describe the pathophysiology of the following abdominal and gastrointestinal disorders: • Abdominal pain • Acute abdomen • Peritonitis • Appendicitis • Pancreatitis • Cholecystitis • Gastrointestinal bleeding • Esophageal varices • Gastroenteritis • Ulcers • Intestinal obstruction • Hernia

	• Abdominal aortic aneurysm
	26.03 Identify the signs and symptoms of common GI disorders.
	26.04 Describe and demonstrate the assessment and management of the patient with various gastrointestinal emergencies.
	26.05 Differentiate between hemorrhagic and non-hemorrhagic abdominal pain.
27.0	**Immunology:** Demonstrate a fundamental depth, foundational breadth of knowledge of the assessment and management of immunology disorders/emergencies patients of all ages. The student will be able to:
	27.01 Define and differentiate allergic reaction and anaphylaxis.
	27.02 Describe the pathophysiology of the following immunology disorders: • allergic reaction • anaphylaxis • anaphylactic shock
	27.03 Describe and demonstrate the assessment and management of the patient in patients of all ages experiencing an allergic or anaphylactic reaction.
	27.04 Review the following for the epinephrine auto-injector: • generic and trade names • medication forms • dose • administration • action • contraindications
	27.05 Demonstrate the use of epinephrine auto-injector.
	27.06 Review the anatomy and physiology of the organs and structures related to anaphylaxis.
	27.07 Describe the incidence, morbidity and mortality of anaphylaxis.
	27.08 Recognize the signs and symptoms related to anaphylaxis.
	27.09 Describe the risk factors for and prevention of anaphylaxis and appropriate patient education.
	27.10 Discuss common antigens most frequently associated with anaphylaxis.
	27.11 Explain the importance of separating the patient from the allergen when possible.
28.0	**Infectious Disease:** Demonstrate a simple depth, simple breadth of knowledge of the assessment and management of a patient who may have an infectious disease patients of all ages. The student will be able to:
	28.01 Discuss the causes of infectious diseases

	28.02 Describe the pathophysiology of infectious diseases of significant public health concern.
	28.03 Describe and demonstrate the assessment and management of the patient in patients of all ages experiencing an infectious disease.
	28.04 Discuss mandatory notification to state or federal agencies of various diseases.
	28.05 Identify patients with risk factors for infectious disease.
	28.06 Explain the principles and practices of infection control in prehospital care.
	28.07 Describe and discuss the rationale for the various types of PPE.
	28.08 Discuss the proper disposal of contaminated supplies (sharps, gauze sponges, tourniquets, etc.).
	28.09 Discuss decontamination of the ambulance and disinfection of patient care equipment, and areas in which care of the patient occurred.
	28.10 Describe the actions to take if the EMS provider is exposed to an infectious disease.
	28.11 Demonstrate the ability to comply with body substance isolation guidelines.
	28.12 Discuss the pathophysiology, risk factors, assessment, and prehospital management of sepsis/systemic inflammatory response syndrome (SIRS)
	28.13 Identify the signs and symptoms and discuss the assessment and prehospital management of a patient in septic shock.
	28.14 Describe the risk factors for and prevention of infectious disease and appropriate patient education (including but not limited to hand-washing, PPE use, and disposal of contaminated supplies).
29.0	**Endocrine Disorders:** Demonstrate a fundamental depth, foundational breadth of knowledge of the assessment and management of endocrine disorders/emergencies patients of all ages. The student will be able to:
	29.01 Review the anatomy and physiology of the endocrine system and its main function in the body.
	29.02 Describe the pathophysiology and signs and symptoms of the following endocrine disorders: • Insulin dependent Diabetes Mellitus • Non-insulin dependent Diabetes Mellitus • Hypoglycemia • Hyperglycemia • Diabetic Ketoacidosis (DKA) • Hyperglycemic Hyperosmolar Non-ketotic Syndrome (HHNS)
	29.03 Define and differentiate between Type I and Type II Diabetes.
	29.04 Identify and demonstrate the steps in the management of the patient taking diabetic medicine with an altered mental status and a history of diabetes, patients of all ages.
	29.05 Review the following for oral glucose:

		• Generic and trade names • Medication forms • Dose • Administration • Action • Contraindications
	29.06	Demonstrate the steps of using a glucometer device and administering oral glucose.
	29.07	Describe and demonstrate the assessment and the management of the patient experiencing an endocrinologic emergency to include hypo- and hyper-glycemia.
	29.08	Discuss the general assessment findings associated with endocrinologic emergencies. Patients of all ages.
	29.09	Describe the risk factors for and prevention of endocrine emergencies, including but not limited to healthy lifestyles and modifiable risk factors, the use of blood sugar monitoring devices and self-administration of prescribed medications.
30.0		**Psychiatric:** Demonstrate a fundamental depth, foundational breadth of knowledge regarding the assessment and management of psychiatric emergencies patients of all ages. The student will be able to:
	30.01	Differentiate among behavior, psychiatric disorders and behavioral emergencies
	30.02	Discuss common psychiatric disorders and behavioral emergencies.
	30.03	Discuss the general factors that may cause an alteration in a patient's behavior.
	30.04	Discuss patterns of violence, abuse, and neglect.
	30.05	Discuss the risk factors/signs or symptoms of various psychiatric emergencies to include acute psychosis, suicide ideation, excited delirium, anxiety, depression, medical fear, substance use disorder, and PTSD.
	30.06	Manage a behavioral emergency scenario applying knowledge of medical/legal Florida Statutes.
	30.07	Describe and demonstrate the assessment and management of the patient experiencing a behavioral or psychiatric emergency.
	30.08	Discuss the risk factors/signs or symptoms of various psychiatric emergencies to include acute psychosis, suicide ideation, excited delirium, anxiety, depression, medical fear, substance use disorder, and PTSD.
	30.09	Demonstrate an understanding of appropriate and available mental health resources and provide patient education.
	30.10	Describe and demonstrate the assessment and management of the patient experiencing a behavioral or psychiatric emergency, patients of all ages.
	30.11	Describe the biological, psychosocial, and sociocultural influences on psychiatric disorders.
	30.12	Describe the special considerations for the safety of the EMS provider and EMS crew, the patient and bystanders when dealing with behavioral and psychiatric emergencies.
	30.13	Describe and demonstrate methods of restraint that may be used in the management of a patient with a behavioral emergency.

	30.14 Explain the importance of provider behavior and communication in the care of a patient with a behavioral emergency.
31.0	**Cardiovascular**: Demonstrate a fundamental depth, foundational breadth of knowledge of the assessment and management of cardiovascular emergencies patients of all ages. The student will be able to:
	31.01 Review the basic anatomy and physiology of the cardiovascular system.
	31.02 Describe the pathophysiology and signs and symptoms of the following cardiovascular disorders: • Acute coronary syndrome • Angina pectoris • Thromboembolism • Myocardial infarction • Hypertensive emergencies • Aortic aneurysm/dissection • Left and right sided heart failure • Cardiogenic shock • Cardiac arrest
	31.03 Describe and demonstrate the assessment and management of the patient experiencing a cardiac emergency.
	31.04 Discuss the indications and contraindications for automated external defibrillation (AED). (including automatic, manual and vest type).
	31.05 Explain the impact of age and weight on defibrillation.
	31.06 Discuss the position of comfort for patients with various cardiac emergencies.
	31.07 Explain the rationale for early defibrillation.
	31.08 Discuss and differentiate among various types of external defibrillators.
	31.09 Discuss and differentiate among the various types of implanted cardiac devices.
	31.10 Understand the importance of maintenance and operators check list for AED's.
	31.11 Demonstrate the ability to use an AED according to the latest American Heart Association (AHA) guidelines.
	31.12 Explain the role medical direction plays in the use of automated external defibrillation.
	31.13 Explain the rationale for administering nitroglycerin oxygen and ASA to a patient with chest pain or discomfort.
	31.14 Demonstrate the assessment and documentation of patient response to the automated external defibrillator.
	31.15 Demonstrate the assessment and documentation of patient response to nitroglycerin.
	31.16 Discuss the purpose and use of CPR assist devices.

	31.17 Describe the risk factors for and prevention of cardiac related diseases and provide appropriate patient education.
	31.18 Discuss the signs and symptoms of acute coronary syndrome and provide appropriate patient education to include self-administration of prescribed medications.
32.0	**Toxicology:** Demonstrate a fundamental depth, foundational breadth of knowledge of the assessment and management of toxicological (poisoning and overdose) emergencies patients of all ages. The student will be able to:
	32.01 Define and differentiate among toxicology, poisoning, and overdose.
	32.02 Describe the pathophysiology and signs and symptoms of the following toxicological emergencies, including but not limited to: • Food poisoning • Carbon monoxide poisoning • Cyanide poisoning • Exposure to acid or alkaline substances • Exposure to hydrocarbons • Methanol ingestion • Isopropanol ingestion • ethylene glycol ingestion • Exposure to poisonous plants • Drug withdrawal • Alcoholic syndrome • Withdrawal syndrome (including delirium tremens) • Illicit drug use • Medication overdose • Opioid overdose • Organa phosphate overdose • Nerve agents
	32.03 Discuss various ways that toxins enter the body. Including inhalation, ingestion, injection, and absorption.
	32.04 Discuss and demonstrate the assessment and management for the patient with a toxicological emergency.
	32.05 Discuss the role of the Poison Control Center with the nationwide contact number 800-222-1222 in the United States.
	32.06 Explain the rationale for contacting medical direction early in the prehospital management of a patient with a toxicological emergency.
	32.07 Review the following for Narcan (naloxone): • Generic and trade names • Medication forms • Dose • Administration • Action

	• Contraindications
32.08	Discuss the use of medication assisted treatments for substance misuse disorders including suboxone, methadone, and naltrexone and potential complications.
32.09	Discuss safe uses and practices with potentially toxic substances while providing appropriate patient education
33.0	**Respiratory:** Demonstrate a fundamental depth, foundational breadth of knowledge of the assessment and management of respiratory disorders/emergencies patients of all ages. The student will be able to:
33.01	Review the basic anatomy and physiology of the respiratory system.
33.02	Describe the pathophysiology and signs and symptoms of the following respiratory disorders: • Chronic Obstructive Pulmonary Disease • Asthma • Bronchiolitis • Pulmonary Edema • Spontaneous Pneumothorax • Hyperventilation Syndrome • Cystic Fibrosis • Pulmonary Embolism • Pneumonia • Viral Respiratory Infections • Poisonous Exposures • Bacterial respiratory infections
33.03	Discuss signs of adequate air exchange.
33.04	Discuss the signs and symptoms of a patient across the continuum from respiratory distress to failure.
33.05	Describe and demonstrate the assessment and management of the patient with a respiratory emergency. Patients of all ages.
33.06	Review the following for the metered-dose inhalers and small volume nebulizers for medications within the scope of practice of the EMT: • Generic name • Medication forms • Dose • Administration • Action • Indications • Contraindications
33.07	Describe and demonstrate the steps in facilitating the use of an inhaler and a small volume nebulizer.

	33.08 Differentiate between upper and lower airway obstruction.
	33.09 Demonstrate assessment and interpretation of normal and abnormal lung and breath sounds. Patients of all ages.
	33.10 Discuss common respiratory disorders, self-administered medications, and equipment (including, but not limited to home oxygen, nebulizers, and CPAP) and provide appropriate patient education.
34.0	**Hematology:** Demonstrate a simple depth, simple breadth of knowledge of the assessment, and management of hematology disorders patients of all ages. The student will be able to:
	34.01 Review the compositions and functions of blood and plasma.
	34.02 Describe the pathophysiology of the following hematology disorders: • Anemia • Sickle Cell Anemia / Sickle Cell Crisis • Hemophilia/Clotting disorders
	34.03 Describe and demonstrate the assessment and the management of the patient with a hematological disorder. Patients of all ages.
	34.04 Discuss signs, symptoms, and potential complications of various hematological disorders and provide appropriate patient education
35.0	**Genitourinary /Renal:** Demonstrate a simple depth, simple breath of knowledge of the assessment and management of genitourinary/ renal emergency patients of all ages. The student will be able to:
	35.01 Review the basic anatomy and physiology of the genitourinary and renal systems.
	35.02 Describe the pathophysiology and signs and symptoms of the following genitourinary/ renal disorders: • Urinary tract infection • Kidney stones • Kidney failure
	35.03 Discuss the basic principles and complications of kidney dialysis.
	35.04 Discuss the recognition and complications of urinary catheters.
	35.05 Describe and demonstrate the assessment and management of the patient with a dialysis emergency. Patients of all ages.
	35.06 Discuss traumatic injuries to the genitourinary system, including, but not limited to: sexual assault (female and male).
36.0	**Gynecology:** Demonstrate a fundamental depth, foundational breadth of knowledge of the assessment and management of gynecologic emergencies patients of all ages. The student will be able to:
	36.01 Review the basic anatomy and physiology of the female reproductive system.
	36.02 Describe the pathophysiology and signs and symptoms of the following gynecologic disorders and emergencies, including but not limited to: • Sexual assault • Non-traumatic vaginal bleeding

		• Menstrual pain • Ovarian cyst • Endometritis • Endometriosis • Pelvic inflammatory disease • Sexually Transmitted Disease
	36.03	Describe and demonstrate the assessment and management of the patient experiencing a gynecologic emergency. Patients of all ages.
	36.04	Describe the assessment and management of a patient who has experienced a sexual assault including the psychosocial impact and assessment findings/presentations.
	36.05	Discuss the professional and psychological importance of maintaining a patient's modesty and privacy while still being able to obtain necessary information.
	36.06	Discuss the need to provide care for a patient of sexual assault, while still preventing destruction of crime scene information.
37.0	**Non-Traumatic Musculoskeletal Disorders:** Demonstrate a fundamental depth, foundational breadth of knowledge of the assessment and management of non-traumatic fractures patients of all ages. The student will be able to:	
	37.01	Review the basic anatomy and physiology of the musculoskeletal system.
	37.02	Describe and demonstrate the assessment and management of the patient in all age groups with a non-traumatic musculoskeletal emergency.
38.0	**Diseases of the Eyes, Ears, Nose, and Throat:** Demonstrate a simple depth, simple breadth of knowledge of assessment and management of diseases of the Eyes, Ears, Nose, and Throat patients of all ages The student will be able to:	
	38.01	Describe and demonstrate the assessment and management of the patient in all age groups with abnormal conditions affecting the eyes, ears, nose and throat, including epistaxis.
39.0	**Shock and Resuscitation:** Demonstrate a fundamental knowledge of the causes, pathophysiology, and management of shock and respiratory failure patients of all ages. The student will be able to:	
	39.01	Discuss and identify causes and pathophysiology of the categories of hemorrhage and shock.
	39.02	Review causes and pathophysiology of respiratory failure and arrest.
	39.03	Review causes and pathophysiology of cardiac failure or arrest.
	39.04	Discuss the various types and degrees of shock.
	39.05	Discuss post resuscitation management.
	39.06	Explain the system components of CPR, the links in the AHA chain of survival and how each relates to patient survival.
	39.07	Define and differentiate between compensated and decompensated shock.
	39.08	Discuss the importance of teamwork in the successful management of the critical patient.

	39.09 Demonstrate how to perform one and two rescuer CPR, adult, child, and infant.
	39.10 Demonstrate how to perform rescuer level appropriate defibrillation in an adult, child, and infant patient.
	39.11 Demonstrate rapid decision making based on differential field diagnosis of the critical patient with a ***special arrest*** peri-arrest condition.
	39.12 Describe and demonstrate the assessment and management of the patient with hemorrhage and shock.
	39.13 Discuss ethical issues in resuscitation.
	39.14 Discuss options for termination resuscitation.
40.0	**Trauma Overview:** Demonstrate a fundamental depth, foundational breadth of knowledge of pathophysiology, assessment and management of the trauma patient patients of all ages. The student will be able to:
	40.01 Discuss pathophysiology of the trauma patient.
	40.02 Discuss the components of a comprehensive trauma systems and levels of trauma centers.
	40.03 Describe the considerations for different transportation modes, ***transport and destination issues*** to a trauma center.
	40.04 Discuss the kinematics of blunt and penetrating trauma.
	40.05 Discuss and describe significant and non-significant Mechanism of Injury (MOI) and provide examples of each.
	40.06 Demonstrate the application of the State of Florida's trauma scorecard methodologies as required in Florida Statute and Florida Administrative Code (F.A.C.).
	40.07 Discuss the National Trauma Triage Protocol of injured Patients.
	40.08 Discuss forming a field impression and utilizing available information to determine a differential diagnosis.
	40.09 Identify the need for rapid intervention transport of the trauma patient.
41.0	**Bleeding:** Demonstrate a fundamental depth, foundational breadth of knowledge of pathophysiology, assessment, and management of bleeding patients of all ages. The student will be able to:
	41.01 Review the anatomy and physiology of the circulatory system.
	41.02 Discuss the different types of bleeding and classes of hemorrhage.
	41.03 Review signs and symptoms of shock (hypo-perfusion).
	41.04 Demonstrate effective hemorrhage control to include application of a tourniquet.
	41.05 Review the pathophysiology of hemorrhagic shock.

	41.06 Recognize the need for rapid transport for patients that are bleeding and showing signs of shock (hypo-perfusion).
	41.07 Describe and demonstrate the assessment and management of a patient with hemorrhagic shock.
	41.08 Discuss the possible complications of an improperly applied dressing, bandage, tourniquet, and hemostatic agents.
42.0	**Chest Trauma:** Demonstrate a fundamental depth, simple breadth of knowledge of pathophysiology, assessment and management of chest trauma patients of all ages. The student will be able to:
	42.01 Review the anatomy and physiology of the thoracic/chest cavity and respiratory system.
	42.02 Differentiate between a pneumothorax (open, simple and tension) and hemothorax.
	42.03 Discuss the pathophysiology, signs and symptoms, and MOI of myocardial injuries, including the following: • Pericardial tamponade • Myocardial contusion • Myocardial rupture • Commotio cordis • Aortic sheerer
	42.04 Discuss the pathophysiology, signs and symptoms, and MOI of specific chest wall injuries, including the following: • Rib fracture • Flail segment • Sternal fracture • Open chest wound • Impaled object
	42.05 Describe and demonstrate the assessment and management of chest trauma ***to include blunt versus penetrating trauma.***
43.0	**Abdominal and Genitourinary Trauma:** Demonstrate a fundamental depth, simple breadth of knowledge of pathophysiology, assessment and management of abdominal and genitourinary trauma patients of all ages. The student will be able to:
	43.01 Review the anatomy and physiology of the abdominal cavity and genitourinary system.
	43.02 Discuss the pathophysiology, signs and symptoms, and MOI for abdominal trauma including *evisceration, impaled objects, blunt versus penetrating mechnaisms*, h**o**llow and solid ***organ*** injuries.
	43.03 Describe and demonstrate the assessment and management of a patient with a suspected abdominal or genitourinary injury/trauma to include internal/external genitalia.
44.0	***Orthopedic Trauma:*** *Demonstrate a fundamental depth, foundational breadth of knowledge of pathophysiology, assessment, and management of orthopedic trauma patients of all ages. The student will be able to:*
	44.01 Review the anatomy and physiology of the Musculo-skeletal system.
	44.02 Discuss pathophysiology, signs and symptoms, and MOI for orthopedic trauma including *evisceration, impaled objects, blunt versus penetrating mechanisms*, h**o**llow and solid ***organ*** injuries.
	44.03 Discuss the different types of orthopedic trauma including fracture classifications. To include:

	• Open fracture • Closed fracture • Dislocation • Upper and Lower extremity orthopedic trauma • Sprains and Strains Pelvic Fracture
44.04	Explain the rationale for stabilization of an injured extremity. To include: • Open fracture • Closed fracture • Dislocation • Upper and Lower extremity orthopedic trauma • Sprains and Strains • Pelvic Fracture
44.05	Describe and demonstrate the assessment and management of a patient with a suspected orthopedic trauma.
44.06	Discuss the following management techniques: • Heat therapy • Cold therapy • Splinting
44.07	List the six “P’s” of orthopedic injury assessment.
44.08	Discuss the need for assessment of distal pulses, motor, and sensation before and after splinting.
44.09	Review age-associated changes in the bones.
44.10	Discuss the proper procedures to package an amputated body part for replantation.
44.11	Explain the rationale for splinting at the scene versus load and go.
44.12	Demonstrate the proper use of various splinting materials and devices to include improvised and traction splints.
45.0	**Soft Tissue Trauma:** Demonstrate a fundamental depth, foundational breadth of knowledge of pathophysiology, assessment, and management of soft tissue trauma patients of all ages. The student will be able to:
45.01	Review anatomy and physiology of the integumentary system to include the layers of the skin.
45.02	Describe the pathophysiology, signs and symptoms, and MOI of soft tissue trauma.
45.03	Describe and demonstrate the assessment and management of various soft tissue injuries. • Wounds (e.g., avulsion, bite, laceration, puncture, and incisions) • Crush and compartment syndrome • High pressure injection injury

45.04	Identify types of burn injuries, including: • Thermal burn • Chemical burn • Electrical burn • Radiation exposure
45.05	Describe the depth classifications of burn injuries, including: • Superficial burn • Partial-thickness burn • Full-thickness burn • Other depth classifications
45.06	Describe and demonstrate methods for determining body surface area percentage of a burn injury including the “rule of nines," the "rule of palms," and other methods.
45.07	Explain how the seriousness of a burn is related to its depth and percent of body surface area (BSA) involved.
45.08	Review the various management techniques for hemorrhage control.
45.09	Differentiate among the types of injuries requiring the use of an occlusive versus non- occlusive dressing.
45.10	Demonstrate the assessment and management of specific burn injuries including: • Thermal • Inhalation • Chemical ***(in the eye and on the skin)*** • Electrical • Radiation
46.0	**Head, Facial, Neck, and Spine Trauma:** Demonstrate a fundamental depth, foundational breadth of knowledge of pathophysiology, assessment, and management of head, facial, neck and spine trauma patients of all ages. The student will be able to:
46.01	Review the anatomy and physiology of the head, face, neck and spine.
46.02	Describe the pathophysiology, signs and symptoms, and MOI for head, face, neck, and spine trauma.
46.03	Describe and demonstrate the assessment and management of a patient with the following traumas to the head, face, neck, and spine: • Penetrating neck trauma • Laryngotracheal injury • Skull fracture • Facial fracture • Eye injury (foreign body) *eyes, globe rupture*) • Dental trauma • Shaken Baby Syndrome • Severe epistaxsis

	46.04 Recognize and manage life threats due to face, head, neck, and spine trauma.
	46.05 Discuss and demonstrate the utilization of the Glasgow Coma Scale.
47.0	**Nervous System Trauma:** Demonstrate a fundamental depth, foundational breadth of knowledge of pathophysiology, assessment, and management of nervous system trauma patients of all ages. The student will be able to:
	47.01 Review the anatomy and physiology of the nervous system.
	47.02 Discuss the pathophysiology, signs and symptoms, and MOI for ***traumatic*** brain ***injury (TBI)*** and spinal cord trauma.
	47.03 Describe and demonstrate the assessment and management of a patient with a ***traumatic*** brain ***injury (TBI)*** and/or spinal cord trauma.
	47.04 Discuss the rationale and potential complications of spinal motion restriction of the entire spine when a cervical spine injury is suspected.
	47.05 Given a scenario, discuss whether or not to remove a helmet prior to transport of a patient.
	47.06 Demonstrate various methods for stabilization and removal of a helmet.
	47.07 Discuss documentation of assessment before, during, and after spinal motion restriction.
48.0	**Special Considerations in Trauma:** Demonstrate a fundamental depth, foundational breadth of knowledge of pathophysiology, assessment and management of trauma patients with special considerations patients of all ages. The student will be able to:
	48.01 Review the anatomy and physiology for the following trauma patients: • Pregnant • Pediatric • Geriatric
	48.02 Discuss the pathophysiology, signs and symptoms, and MOI of trauma in the following patients: • Pregnant • Pediatric • Geriatric
	48.03 Discuss and demonstrate unique assessment and management considerations for the following trauma patients: • Pregnant • Pediatric • Geriatric • Cognitively impaired
49.0	**Environmental Emergencies:** Demonstrate a fundamental depth, foundational breadth of knowledge of pathophysiology, assessment and management of environmental emergencies, patients of all ages. The student will be able to:
	49.01 Define drowning and discuss its incidence, rick factors and prevention.
	49.02 Discuss the pathophysiology, signs and symptoms, and MOI of the following: • Drowning and water related incidents

	• Temperature-related illness • Bites and envenomation • Dysbarism such as high-altitude injuries • Diving injuries • Lightning (electrical) injury • High altitude illness • Radiation exposure • Other environmental emergencies
	49.03 Describes and demonstrate the assessment and management for a patient with the following: • Drowning and water related incidents • Temperature-related illness • Bites and envenomation • Dysbarism such as high-altitude injuries • Diving injuries • Lightning (electrical) injury • High altitude illness • Radiation exposure • Other environmental emergencies
	49.04 Discuss the fundamental principles of the gas laws including Boyle's, Dalton, Henry and Charles.
	49.05 Discuss scene management and provider safety considerations for a variety of environmental emergencies.
	49.06 Explain the five ways a body can lose heat.
	49.07 Discuss potentially life-threatening venomous species of insects, spiders and snakes in the U.S.
50.0	**Multi-Systems Trauma:** Demonstrate a fundamental depth, foundational breadth of knowledge of the pathophysiology, assessment, and management of multi-system trauma and blast injuries, patients of all ages. The student will be able to:
	50.01 Discuss the pathophysiology, signs and symptoms, and MOI of multi-system trauma and blast injuries.
	50.02 Describe and demonstrate assessment and management considerations for a patient of multi system trauma and blast injuries.
	50.03 Describe and demonstrate assessment and management considerations for a patient of multi system trauma and blast injuries.
	50.04 Formulate a field impression based upon the assessment findings for a patient with multi systems trauma and/ or blast injuries
51.0	**Obstetrics:** Demonstrate a fundamental depth, foundational breadth of management of the obstetric patient within the scope of practice of the EMT. The student will be able to:
	51.01 Identify and describe the anatomical and the physiological changes during pregnancy.
	51.02 Define the stages of labor and discuss how to assess them.

	51.03 Differentiate between cephalic and abnormal delivery.
	51.04 Describe the management of a patient with pre-delivery emergencies.
	51.05 Discuss and demonstrate the patient care measures for all stages of labor in a cephalic delivery for the mother and the newborn.
	51.06 Describe the management of the mother post-delivery.
	51.07 Discuss and demonstrate the patient care measures for all stages of labor in abnormal deliveries for the mother and the newborn.
	51.08 Describe the procedures for handling complications of delivery.
	51.09 Describe special considerations when meconium is present in amniotic fluid or during delivery.
	51.10 Identify the factors that lead to premature birth and low birth weight newborns.
	51.11 Demonstrate the procedures for handling complications of pregnancy including pre-eclampsia, eclampsia, and high risk.
52.0	**Neonatal Care:** Demonstrate a fundamental depth, foundational breadth of knowledge of management of the newborn and neonatal patient within the scope of practice of the EMT. The student will be able to:
	52.01 Discuss and demonstrate assessment and management considerations of a neonate.
	52.02 Define the term neonate.
	52.03 Describe special patient care considerations of a premature baby.
	52.04 Calculate the Apgar score given various newborn situations.
	52.05 Discuss the common signs when ventilarory assistance is appropriate for a neonate.
	52.06 Discuss and demonstrate the steps in resuscitation of a neonate.
	52.07 Review the signs of hypovolemia in a newborn.
	52.08 Discuss the effects maternal narcotic usage has on the newborn.
	52.09 Discuss the management/treatment plan for vomiting in the neonate.
	52.10 Discuss the assessment findings associated with common birth injuries in the neonate.
53.0	**Pediatrics:** Demonstrate a fundamental depth, fundamental breath of knowledge of management of the pediatric patient within the scope of practice of the EMT. The student will be able to:
	53.01 Review the anatomy, physiology and pathophysiology differences of patients.

	53.02 Discuss the differences in approaching and assessing patients.
	53.03 Discuss and demonstrate assessment and management considerations for Sudden Unexplained Infant Death Syndrome (SUIDS).
	53.04 Describe the selection of appropriate airway adjuncts and ventilation devices.
	53.05 Discuss complications of improper utilization of airway adjuncts and ventilation devices.
	53.06 Describe the common causes, assessment and management of respiratory distress, failure, or arrest.
	53.07 Discuss the common causes, assessment and management of hypo-perfusion.
	53.08 Discuss the common causes, assessment and management of cardiopulmonary arrest.
	53.09 Describe the common causes, assessment and management of altered level of consciousness.
	53.10 Describe the common causes, assessment and management of trauma.
	53.11 Describe the common causes, assessment and management of neurological emergencies.
	53.12 Demonstrate proper technique for administering blow-by oxygen.
	53.13 Review proper technique for suctioning.
	53.14 Review appropriate use of airway adjuncts and ventilation devices.
	53.15 Review age-appropriate basic airway clearing maneuvers for a completely obstructed airway.
54.0	**Geriatrics:** Demonstrate a fundamental depth, foundational breadth of knowledge of management of the geriatric patient within the scope of practice of the EMT. The student will be able to:
	54.01 Define and discuss the term geriatrics.
	54.02 Review the anatomy, physiology and pathophysiology of the geriatric patient.
	54.03 Discuss common emotional and psychological concerns and conditions of the geriatric patient.
	54.04 Discuss the importance of fall prevention with the geriatric patient.
	54.05 Describe principles that should be employed when assessing and communicating with the geriatric patient.
	54.06 Describe the common causes, assessment, and management of the geriatric patient with a medical, trauma, or psychosocial complaint.
55.0	**Patients with Special Challenges:** Demonstrate a simple depth, simple breadth of knowledge of the management of the patient with special challenges patients of all ages. The student will be able to:

	55.01 Discuss the special considerations required when providing emergency care to patients with: • Abuse/neglect of vulnerable populations • Homelessness • Poverty • Bariatrics • Tech dependent • Hospice/terminally ill • Tracheostomy • Home care • Sensory deficit/loss • Developmental disability
	55.02 Discuss special considerations regarding common medical devices used in the home care of patients with special challenges including: • Respiratory devices • Cardiac devices • Gastro-urinary devices • Central & peripheral IV catheters
	55.03 Describe home care and the types of patients it serves and the services it encompasses.
	55.04 Differentiate between hospice/palliative care and curative care.
	55.05 Discuss the role of the EMT as a patient advocate for vulnerable populations.
56.0	**Principles of Safely Operating a Ground Ambulance:** Demonstrate a simple depth, foundational breadth of knowledge of risks and responsibilities of transport. The student will be able to:
	56.01 Discuss the importance of performing regular vehicle and equipment inspection.
	56.02 Demonstrate how to perform a daily inspection of an ambulance.
	56.03 Review the general provisions of Florida laws relating to the operation of the ambulance.
	56.04 Discuss the guidelines for operating an ambulance safety during emergency and non-emergency situation/incident.
	56.05 Review considerations that are required for ensuring scene safety, including personal safety, patient safety, and traffic control.
	56.06 Review how to clean and disinfect the ambulance and equipment.
57.0	**Incident Management:** Demonstrate a fundamental depth, fundamental breadth of knowledge of establishing and working within the incident management system. The student will be able to:
	57.01 Discuss the importance of NIMS (National Incidence Management System) and its functional components.

	57.02 Discuss unified command and when it is applicable.
	57.03 Describe the role of command and the procedures for transfer of command.
	57.04 List and describe the functions of the following groups and leaders in ICS as it pertains to EMS incidents: • Safety • Logistics • Rehabilitation • Staging, • Treatment • Triage • Transportation • Extrication/rescue • Morgue • Communications
	57.05 Discuss the physical and psychological signs of critical incident stress.
58.0	**Multiple Casualty Incidents:** Demonstrate a simple depth, foundational breadth of knowledge of responding to an emergency during a multiple casualty incident. The student will be able to:
	58.01 Review essential elements of scene size-up when arriving at a potential MCI.
	58.02 Describe the role of the rescuers and EMS systems in planning for MCIs and disasters.
	58.03 Describe the role of the physician at multiple casualty incidents.
	58.04 Define triage and describe the principles of triage.
	58.05 Describe the START (simple triage and rapid treatment) and JUMP START method of initial triage.
	58.06 Describe techniques used to allocate patients to hospitals and track them.
	58.07 Discuss and describe the essential equipment to provide logistical support to MCI operations.
	58.08 Describe the role of critical incident stress management during and after MCIs.
	58.09 Demonstrate the use of local/regional triage tagging system.
59.0	**Air Medical:** Demonstrate a simple depth, simple breadth of knowledge of safe air medical operations and criteria for utilizing air medical response. The student will be able to:
	59.01 Describe key scene safety considerations when preparing for a helicopter medivac, including establishing a landing zone and approaching the aircraft.
	59.02 Describe the capabilities, protocols, and methods for accessing air medical transport.

	59.03 Review the advantages and disadvantages of air medical transport.
	59.04 Review the conditions/situations in which air medical transport should be considered.
60.0	**Vehicle Extrication:** Demonstrate a simple depth, simple breadth of knowledge for safe vehicle extrication and use of simple hand tools. The student will be able to:
	60.01 Describe the role of the EMT in patient rescue and vehicle extrication
	60.02 Describe personal and patient safety during vehicle extrication.
	60.03 Explain the difference between simple access and complex access in vehicle extrication.
	60.04 Discuss patient care considerations related to assisting with rapid extrication, providing emergency care to the trapped patient and removing and transferring a patient.
	60.05 Discuss the use of simple hand tools used for vehicle extrication.
	60.06 Discuss and describe the hazards and safe practices associated with the following vehicle components: • Energy absorbing bumpers • Air bag/supplemental restraint systems • Catalytic converters and conventional fuel systems • Stored energy • Hybrid-electric vehicles
	60.07 Describe methods for emergency stabilization using rope, cribbing, jacks, spare tire, and come-a-longs for vehicles.
	60.08 Describe the electrical hazards commonly found at highway incidents (above and below ground).
	60.09 Explain the difference between tempered and safety glass, identify its locations on a vehicle and how to break it safely.
	60.10 Explain typical door anatomy and methods to gain access to the patient.
61.0	**Hazardous Materials Awareness:** Demonstrate a simple depth, simple breadth of knowledge of risks and responsibilities of operating in a cold zone at a hazardous material or other special incident. The student will be able to:
	61.01 Identify and describe resources for substance identification, decontamination, and treatment information, including but not limited to the following: • Poison control center • Medical control • Material safety data sheets (MSDS), • Reference textbooks • Computer databases • Computer-Aided Management of Emergency Operations (CAMEO) • CHEMTREC • Technical specialists

	• Agency for toxic substances and disease registry
61.02	Explain primary and secondary contamination risk.
61.03	Review routes of exposure.
61.04	Discuss how the substance and route of contamination alters triage and decontamination methods.
61.05	Explain the common signs, symptoms, and treatment for the following substances: • Corrosives • Pesticides • Chemical asphyxiants • Hydrocarbon solvents
61.06	Identify local facilities and resources capable of treating patients exposed to hazardous materials.
61.07	Determine the appropriate level of PPE by considering the following: • Types • Application • Use and limitations • Use of chemical compatibility chart
61.08	Explain specific decontamination procedures.
61.09	Discuss the designated HAZMAT control zones (HOT, WARM, and COLD).
61.10	Discuss an emergency two-step decontamination process.
61.11	Identify DOT Labels, placards and markings that are used to designate HAZMAT materials.
61.12	Demonstrate the ability to use a variety of reference materials to identify a HAZMAT material.
62.0	**Mass Casualty Incidents Due to Terrorism and Disaster:** Demonstrate a simple depth, simple breadth of knowledge of risks and responsibilities of operating on the scene of a natural or man-made disaster. The student will be able to:
62.01	Describe the role of the EMT on the scene of a natural or man-made disaster.
62.02	Define the different types of terrorism and provide examples of incidents of each.
62.03	Describe the factors related to ensuring situational safety at the site of a disaster and the procedures required.
62.04	Discuss the National Terrorism Advisory System.
62.05	Discuss factors to consider when responding to a terrorist situation.
62.06	Review important actions to take at the scene of a terrorist event such as:

	• Scene safety • Personal protection • Notification procedures • Available resources • Working with in the command system
62.07	List and describe the main categories of weapons of mass destruction.
62.08	Discuss the different types of chemical agents and their signs and symptoms.
62.09	Review the treatment and management of patients exposed to various types of chemical agents and radiation.
62.10	Review the different types of radiations and their effect on the human body.
62.11	Discuss the use of a nerve agent antidote kit.

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as, experimental, quality, and safety procedures are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate and troubleshoot equipment/tools used to make observations. Students understand measurement error; and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

Career and Technical Student Organization (CTSO)

CTSOs are co-curricular career and technical student organizations providing leadership training and reinforcing specific career and technical skills. Career and Technical Student Organizations provide activities for students as an integral part of the instruction offered. Other CTSOs not listed in this curriculum framework or recognized by the Florida Department of Education are permissible provided they support student mastery over the standards and benchmarks of this curriculum framework.

Basic Skills

In Career Certificate programs offered for 450 hours or more, in accordance with Rule 6A-10.040, F.A.C., the minimum basic skills grade levels required for postsecondary adult career and technical students to complete this program are: Computation (Mathematics) and Communications (Reading and Language Arts). These grade level numbers correspond to a grade equivalent score obtained on a state designated basic skills examination.

Adult students with disabilities, as defined in Section 1004.02, Florida Statutes, may be exempted from meeting the Basic Skills requirements (Rule 6A-10.040). Students served in exceptional student education (except gifted) as defined in s. 1003.01, F.S., may also be exempted from meeting the Basic Skills requirement. Each school district and Florida College System Institution must adopt a policy addressing procedures for exempting eligible students with disabilities from the Basic Skills requirement as permitted in Section 1004.91, F.S.

Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

Note: postsecondary curriculum and regulated secondary programs cannot be modified.

Program Length

In accordance with Rule 6A-10.024, F.A.C. an ATD program consists of a course of study that is part of an AS or AAS degree program, is less than 60 credit hours, is approximately 50% of the technical component (non-general education), and leads to employment in a specific occupation. An ATD program may consist of either technical credit or college credit.

Students must have a high school diploma, a GED, or a certificate of completion to be admitted to an ATD program. Within six weeks of entry, students in ATD programs of 450 or more hours must be tested pursuant to Rule 6A-10.040, F.A.C. and if below minimum standards for completion from the program, must receive remedial instruction. The minimum standards must be at least the equivalent of a score of ten (10) on all sections of basic skills test approved in Rule 6A-10.040, F.A.C. Students must successfully complete all remedial instruction before completing the ATD.

Community Colleges may offer either college or career credit toward the ATD. A Career Center in a public school district may offer an ATD program only as technical credit, with college credit awarded to a student upon articulation to a community college (Section 1004.02, F.S.)

When offered at a community college the standard length of this program is 12 credits. When offered at a technical center the standard length of this program is 300 clock hours.

Section 401.2701, Florida Statutes provides that college credit programs must meet occupational completion point hours of instructional and skills practice components.

In accordance with Rule 6A-10.024, F.A.C. all faculty providing instruction must have at least a baccalaureate degree or an associate degree with demonstrated competencies in the specific instructional program as defined by the Southern Association of Colleges and Schools.

Florida Department of Education
Curriculum Framework

Program Title: **Emergency Medical Technician**
Career Cluster: **Health Science**

College Credit Certificate	
CIP Number	0351090415
Program Type	College Credit Certificate (CCC)
Program Length	12 credit hours
CTSO	HOSA
SOC Codes (all applicable)	For program SOC codes, please see the Program and Course Tables section of the CTE Program Resources page linked below.
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml

Purpose

This certificate program is part of the Emergency Medical Services AS degree program (1351090402).

A College Credit Certificate consists of a program of instruction of less than sixty (60) credits of college-level courses, which is part of an AS or AAS degree program and prepares students for entry into employment (Rule 6A-14.030, F.A.C.).

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Health Science career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of Health Science career cluster.

This is an instructional program that prepares students for employment as emergency medical technicians (Emergency Medical Technicians and Paramedics) to function at the basic pre-hospital emergency medical technician level and treat various medical/trauma conditions using appropriate equipment and materials. The program prepares students for certification as EMT's in accordance with Chapter 64J of the Florida Administrative Code (F.A.C.). The program must be approved by the Department of Health, Office of Emergency Medical Services, and the curriculum must adhere to the US Department of Transportation (DOT) National EMS Education Standards for EMT. This is the initial level for a career in emergency medical services and the primary prerequisite for paramedic training and certification.

The content includes but is not limited to patient assessment, airway management, cardiac arrest, external and internal bleeding and shock, traumatic injuries, fractures, dislocations, sprains, poisoning, heart attack, stroke, diabetes, acute abdomen, communicable diseases, patients with

abnormal behavior, alcohol and drug abuse, the unconscious state, emergency childbirth, burns, environmental hazards, communications, reporting, extrication and transportation of patient. The student must be proficient in patient assessment and evaluation, the use of suctioning devices, oral and nasal airways, resuscitation devices, oxygen equipment, sphygmomanometer and stethoscope, splints of all types, pneumatic anti-shock garments, extrication tools, dressings and bandages, stretchers and patient carrying devices.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

"All EMR/EMT/Paramedic students are required to complete the 4-hour Traffic Incident Management Safety (TIMS) course at least once. This requirement can be fulfilled either as a prerequisite or as part of the curriculum, at the discretion of the EMS education program."

"It is highly recommended, though not mandatory, that courses in medical terminology, anatomy, and pharmacology be completed before enrolling in EMT and Paramedic training."

Regulated Programs

Florida Statute 401.2701 requires that the instructor-student ratio should not exceed 1:6. Hospital activity shall include a minimum of 20 hours of supervised clinical supervision, including 10 hours in a hospital emergency department. Clinical activity shall include appropriate patient assessment skills, intervention and documentation relevant to each clinical rotation.

Field Internship Activities: Field internship shall include a competency based program to assure appropriate pre-hospital assessment and management of medical and trauma patients, as well as associated manual skills. The field internship activity shall include a minimum of 5 emergency runs resulting in patient care and transport appropriate for the EMT. In addition, the patient care components should include minimum competencies in patient assessment, airway management and ventilation, trauma and medical emergencies.
This program meets the Department of Health trauma score card methodologies and Sudden Unexpected Infant Death Syndrome (SUIDS) training education requirements. Upon completion of this program, the instructor will provide a certificate to the student verifying that these requirements have been met. This program also meets the Department of Health's education requirements for HIV/AIDS, Domestic Violence and Prevention of Medical Errors. Although not a requirement for initial licensure, it is a requirement for renewal, therefore the instructor **may** provide a certificate for renewal purposes to the student verifying these requirements have been met.

Please refer to Chapter 401, F.S. for more information on disqualification for the EMT license through the Office of Emergency Medical Services (EMS), Department of Health.

An EMT program must be taught by an instructor meeting the qualifications as set forth in 64J-1.201, F.A.C.

An American Heart Association or Red Cross certification or equivalent in "professional" BLS is required of all candidates for entrance into an EMT program.

The Student Performance Standards for Emergency Medical Technology-EMT were adapted and condensed from the US Department of Transportation (DOT) National EMS Educational Standards for EMT.

It is strongly recommended this program be accredited by Commission on Accreditation of Allied Health Education Programs (CAAHEP).

Florida's Career Readiness Skills for CTE Programs

Employability Skills	
01.0	Apply academic skills to workplace scenarios.
01.01	Use reading skills.
01.02	Use writing skills.
01.03	Use mathematical strategies and procedures.
01.04	Use scientific principles and procedures.
02.0	Design a solution to an industry problem.
02.01	Use critical thinking.
02.02	Use creativity.
02.03	Make sound decisions.
02.04	Solve problems.
02.05	Reason.
02.06	Plan and organize.
03.0	Manage resources within an industry project
03.01	Manage time.
03.02	Manage money or resources.
03.03	Manage materials.
03.04	Manage personnel.
04.0	Oversee the subcomponents, operations and output of a technical or organizational system.
04.01	Manage systems.
04.02	Monitor systems.
04.03	Improve systems.
05.0	Use information for decision making.
05.01	Locate information.
05.02	Organize information.
05.03	Use information.

	05.04 Analyze information.
	05.05 Communicate information.
06.0	Apply relevant technology to workplace scenarios to aid productivity.
	06.01 Use technology.
07.0	Interpret and express interpersonal communication.
	07.01 Communicate verbally.
	07.02 Listen actively.
	07.03 Comprehend written material.
	07.04 Convey information in writing.
	07.05 Communicate nonverbally.
	07.06 Interpret nonverbal communication.
08.0	Interact with others to accomplish workplace goals.
	08.01 Collaborate with others in a team.
	08.02 Respond to customer needs.
	08.03 Exercise leadership.
	08.04 Negotiate to resolve conflict.
	08.05 Respect others.
09.0	Manage personal behavior to maximize productivity and professional growth.
	09.01 Demonstrate responsibility and self-discipline.
	09.02 Adapt and show flexibility.
	09.03 Work independently.
	09.04 Demonstrate a willingness to learn.
	09.05 Demonstrate integrity.
	09.06 Demonstrate professionalism.
	09.07 Take initiative.
	09.08 Display positive attitude.
	09.09 Take responsibility for professional growth.

Job Attainment	
10.0	Find, assess and apply to job opportunities.
10.01	Identify online job posts relevant to his or her career aspirations.
10.02	Compare and contrast the job posts' required qualifications, job duties, compensation, benefits and employers.
10.03	Define what information, documentation and writing prompts are required for the positions.
11.0	Communicate personal competence, character and fit for a job opportunity.
11.01	Develop a resume.
11.02	Write a cover letter.
11.03	Curate a professional portfolio that includes work products.
11.04	Prepare for and experience a mock job interview.
12.0	Cultivate and leverage relationships to professionally advance.
12.01	Request a signed reference letter, letter of recommendation and/or an online skill/professionalism endorsement.
12.02	Develop a plan to cultivate a professional digital footprint.
12.03	Develop a networking plan for a specific industry of interest.

Standards

After successfully completing this program, the student will be able to perform the following:

01.0 Demonstrate a simple depth, foundational breadth of knowledge of EMS systems.
02.0 Demonstrate a simple depth, simple breadth of knowledge of research and evidence-based decision making.
03.0 Demonstrate a fundamental depth, foundational breadth of knowledge of workforce safety and wellness.
04.0 Demonstrate a fundamental depth, foundational breadth of knowledge of the principles of medical documentation and report writing.
05.0 Demonstrate a simple depth, simple breadth of knowledge of the EMS communication system, communication with other health care professionals, and team communication.
06.0 Demonstrate a simple depth, simple breadth of knowledge of the principles of therapeutic communication.
07.0 Demonstrate a fundamental depth, foundational breadth of knowledge of medical legality and ethics.
08.0 Demonstrate a fundamental knowledge of the anatomy and function of all human systems to the practice of EMS.
09.0 Demonstrate a fundamental knowledge in the use of medical terminology.
10.0 Demonstrate a fundamental knowledge of the causes and pathophysiology of shock and the components of resuscitation.
11.0 Demonstrate a fundamental knowledge of life span development to patient assessment and management.
12.0 Demonstrate a simple knowledge of the principles of illness and injury prevention in emergency care.
13.0 Demonstrate a simple depth, simple breadth of knowledge of pharmacology, medication safety, and medication types used during an emergency.
14.0 Demonstrate a fundamental depth, simple breadth of knowledge of emergency medications within the scope of practice of the EMT.
15.0 Demonstrate a foundational depth, fundamental breadth of knowledge of airway management patients of all ages within the scope of practice of the EMT.
16.0 Demonstrate a fundamental depth, foundational breadth of knowledge of respiration.
17.0 Demonstrate a fundamental depth, foundational breadth of knowledge of assessment and management utilizing ventilation patients of all ages.
18.0 Demonstrate a fundamental depth, foundational breadth of knowledge of scene management and multiple patient situations**.**
19.0 Demonstrate a fundamental depth, simple breadth of knowledge of the primary assessment for all patient situations.
20.0 Demonstrate a fundamental depth, foundational breadth of knowledge of the components of history taking.
21.0 Demonstrate a fundamental depth, foundational breadth of knowledge of techniques used for a secondary assessment.
22.0 Demonstrate a simple depth, simple breath of knowledge of monitoring devices within the scope of practice of the EMT.
23.0 Demonstrate a fundamental depth, foundational breadth of knowledge of how and when to perform a reassessment for all patient situations.
24.0 Demonstrate a simple depth, foundation breadth of knowledge of pathophysiology, assessment and management of medical complaints.
25.0 Demonstrate a fundamental depth, foundational breadth of knowledge of the assessment and management of neurologic disorders/emergencies patients of all ages.
26.0 Demonstrate a fundamental depth, foundational breadth of knowledge of the assessment and management of abdominal and gastrointestinal disorders/emergencies patients of all ages.
27.0 Demonstrate a fundamental depth, foundational breadth of knowledge of the assessment and management of immunology disorders/emergencies patients of all ages.
28.0 Demonstrate a simple depth, simple breadth of knowledge of the assessment and management of a patient who may have an infectious disease patient of all ages.

29.0 Demonstrate a fundamental depth, foundational breadth of knowledge of the assessment and management of endocrine disorders/emergencies patients of all ages.
30.0 Demonstrate a fundamental depth, foundational breadth of knowledge regarding the assessment and management of psychiatric emergencies patients of all ages.
31.0 Demonstrate a fundamental depth, foundational breadth of knowledge of the assessment and management of cardiovascular emergencies patients of all ages.
32.0 Demonstrate a fundamental depth, foundational breadth of knowledge of the assessment and management of toxicological (poisoning and overdose) emergencies patients of all ages.
33.0 Demonstrate a fundamental depth, foundational breadth of knowledge of the assessment and management of respiratory disorders/emergencies patients of all ages.
34.0 Demonstrate a simple depth, simple breadth of knowledge of the assessment, and management of hematology disorders patients of all ages.
35.0 Demonstrate a simple depth, simple breath of knowledge of the assessment and management of genitourinary/ renal emergencies patients of all ages.
36.0 Demonstrate a fundamental depth, foundational breadth of knowledge of the assessment and management of gynecologic emergencies patients of all ages.
37.0 Demonstrate a fundamental depth, foundational breadth of knowledge of the assessment and management of non-traumatic fractures patients of all ages.
38.0 Demonstrate a simple depth, simple breadth of knowledge of assessment and management of diseases of the Eyes, Ears, Nose, and Throat patients of all ages.
39.0 Demonstrate a fundamental knowledge of the causes, pathophysiology, and management of shock and respiratory failure patients of all ages.
40.0 Demonstrate a fundamental depth, foundational breadth of knowledge of pathophysiology, assessment, and management of the trauma patient patients of all ages.
41.0 Demonstrate a fundamental depth, foundational breadth of knowledge of pathophysiology, assessment, and management of bleeding patients of all ages.
42.0 Demonstrate a fundamental depth, simple breadth of knowledge of pathophysiology, assessment, and management of chest trauma patients of all ages.
43.0 Demonstrate a fundamental depth, simple breadth of knowledge of pathophysiology, assessment, and management of abdominal and genitourinary trauma patients of all ages.
44.0 Demonstrate a fundamental depth, foundational breadth of knowledge of pathophysiology, assessment, and management of orthopedic trauma patients of all ages.
45.0 Demonstrate a fundamental depth, foundational breadth of knowledge of pathophysiology, assessment, and management of soft tissue trauma patients of all ages.
46.0 Demonstrate a fundamental depth, foundational breadth of knowledge of pathophysiology, assessment, and management of head, facial, neck, and spine trauma patients of all ages.
47.0 Demonstrate a fundamental depth, foundational breadth of knowledge of pathophysiology, assessment, and management of nervous system trauma patients of all ages.
48.0 Demonstrate a fundamental depth, foundational breadth of knowledge of pathophysiology, assessment, and management of trauma patients with special considerations patients of all ages.

49.0 Demonstrate a fundamental depth, foundational breadth of knowledge of pathophysiology, assessment, and management of environmental emergencies patients of all ages.
50.0 Demonstrate a fundamental depth, foundational breadth of knowledge of the pathophysiology, assessment, and management of multi-system trauma and blast injuries patients of all ages.
51.0 Demonstrate a fundamental depth, foundational breadth of knowledge of management of the obstetric patient within the scope of practice of the EMT.
52.0 Demonstrate a fundamental depth, foundational breadth of knowledge of management of the newborn and neonatal patient within the scope of practice of the EMT.
53.0 Demonstrate a fundamental depth, fundamental breath of knowledge of the management of the pediatric patient within the scope of practice of the EMT.
54.0 Demonstrate a fundamental depth, foundational breadth of knowledge of management of the geriatric patient within the scope of practice of the EMT.
55.0 Demonstrate a simple depth, simple breadth of knowledge of management of the patient with special challenges patients of all ages.
56.0 Demonstrate a simple depth, foundational breadth of knowledge of risks and responsibilities of transport.
57.0 Demonstrate a fundamental depth, fundamental breadth of knowledge of establishing and working within the incident management system.
58.0 Demonstrate a simple depth, foundational breadth of knowledge of responding to an emergency during a multiple casualty incident.
59.0 Demonstrate a simple depth, simple breadth of knowledge of safe air medical operations and criteria for utilizing air medical response.
60.0 Demonstrate a simple depth, simple breadth of knowledge for safe vehicle extrication and use of simple hand tools.
61.0 Demonstrate a simple depth, simple breadth of knowledge of risks and responsibilities of operating in a cold zone at a hazardous material or other special incident.
62.0 Demonstrate a simple depth, simple breadth of knowledge of risks and responsibilities of operating on the scene of a natural or man-made disaster.

Florida Department of Education
Student Performance Standards

Program Title: **Emergency Medical Technician**
CIP Number: **0351090415**
Program Length: **12 credit hours**

This certificate program is part of the Emergency Medical Services AS degree program (1351090402). At the completion of this program, the student will be able to:	
01.0	**EMS Systems:** Demonstrate a simple depth, foundational breadth of knowledge of EMS systems. The student will be able to:
01.01	Define Emergency Medical Services (EMS) systems.
01.02	Discuss the historical background of the development of the EMS system.
01.03	Identify the four levels of national EMS providers (EMR, EMT, AEMT and PM) as well as the three levels (EMR, EMT, and PM) in the State of Florida.
01.04	Discuss the specific statutes and regulations regarding the EMS system in Florida.
01.05	Discuss vehicle and equipment readiness.
01.06	Characterize the EMS system's role in prevention and public education.
01.07	Systems of care, e.g., Stroke, STEMI, Trauma, Pediatrics (S, F).
01.08	MIH/CP and other EMS-related specialty roles (S, S).
01.09	Discuss the roles and responsibilities of the EMT related to personal safety of the crew, patient and by standers.
01.10	Discuss the roles and responsibilities of the EMT to operate emergency vehicles, provide scene leadership and perform patient assessment and administer emergency care.
01.11	Discuss the maintenance of and differences between certification and licensure for the EMS professional in the State of Florida and NREMT.
01.12	Define quality improvement and discuss the EMT's role in the process.
01.13	Quality improvement vs. quality assurance (S, F).
01.14	Role of medical oversight (S, S).
01.15	Culture of safety.
01.16	Patient safety (SF)

	01.17 Identify the basics of common methods of payment for healthcare services.
	01.18 Analyze attributes and attitudes of an effective leader.
	01.19 Demonstrate effective techniques for managing team conflict.
	01.20 Describe factors that influence the current delivery system of healthcare.
	01.21 Discuss the importance of continuing medical education and skills retention.
	01.22 Continuum of care (S, F).
	01.23 Assess personal attitudes and demeanor that may distract from professionalism.
	01.24 Serve as a role model and exhibit professional behaviors in the following areas: • Integrity • Empathy • Self-motivation • Appearance and personal hygiene • Self-confidence • Communications (including phone, email and social media etiquette) • Time management • Teamwork and diplomacy • Respect • Patient advocacy (inclusive of those with special needs, alternate lifestyles and cultural diversity) • Careful delivery of service
02.0	**Research:** Demonstrate a simple depth, simple breadth of knowledge of research and evidence-based decision making. The student will be able to:
	02.01 Discuss EMS research and evidence-based decision making • Conduct scientific literature searches • Read, interpret, and extract information from journal articles relevant to a project
	02.02 Explain the importance of assessing and treating patients based on evidence-based decision-making.
	02.03 Interpret graphs, charts, and tables.
	02.04 Measure time, temperature, distance, capacity, and mass/weight.
	02.05 Convert and use traditional and metric units.
	02.06 Make estimations, approximations and judge the reasonableness of the result.
	02.07 Convert time from a 12-hour format to a 24-hour format

	02.08 Demonstrate ability to evaluate and draw conclusions.
	02.09 Calculate ratios.
	02.10 Explain the rationale for the EMS system gathering data.
	02.11 Impact of research on EMT care (S, S).
	02.12 Data collection (S, S).
	02.13 Evidence-based decision making (S, S).
03.0	**Workforce Safety and Wellness:** Demonstrate a fundamental depth, foundational breadth of knowledge of workforce safety and wellness. The student will be able to:
	03.01 Explain the need to determine scene safety.
	03.02 Discuss the importance of body substance isolation (BSI).
	03.03 Describe the steps and equipment the EMT should take for personal protection from airborne and blood borne pathogens and communicable disease.
	03.04 List possible emotional reactions that an individual (EMT and EMT family, Patient and Patient family) may experience when faced with trauma, illness, death and dying.
	03.05 Discuss the steps the EMT should take when approaching a family confronted with death and dying.
	03.06 Recognize the warning signs of personal stress and discuss the strategies and resources available for EMTs to utilize.
	03.07 Demonstrate good body mechanics while using a stretcher and other patient moving devices.
	03.08 Discuss the guidelines and safety precautions to be followed when lifting and moving patients and equipment.
	03.09 Discuss patient positioning in common emergency situations.
	03.10 Discuss situation that may require the use of medical restraints on the patient and explain guidelines and safety consideration for their use.
	03.11 Define “infectious disease” and “communicable disease.”
	03.12 Disease transmission (F, F).
	03.13 Describe the routes of transmission and associated risks for infectious disease.
	03.14 Explain the mode of transmission and the steps to prevent/deal with an exposure of hepatitis, meningitis, tuberculosis and HIV.
	03.15 Explain how immunity to infectious diseases is acquired.

	03.16 Explain post exposure management of exposure to patient blood or body fluids, including proper notification documentation.
	03.17 Describe the components of physical fitness and mental wellbeing.
	03.18 Identify personal health practices and environmental factors which affect physical, mental, and emotional wellbeing.
	03.19 Prevention of work-related injuries and illnesses (F, F).
	03.20 Responder mental health, resilience and suicide prevention (F, F).
	03.21 Wellness principles (F, F).
	03.22 Discuss complementary and alternative health practices.
	03.23 Explain the basic concepts of positive self-image, wellness and stress.
	03.24 Discuss the need for a wellness and stress control plan that can be used in personal and professional life.
	03.25 Explore the importance of adequate nutrition (i.e. U.S. Department of Agriculture's MyPlate food guide (www.choosemyplate.gov)).
	03.26 Demonstrate safe behaviors in the proper use of medical equipment.
	03.27 Explain the theory of root- cause analysis.
	03.28 Identify and describe methods in medical error reduction and prevention in the various healthcare settings.
	03.29 Identify and practice security procedures for medical supplies and equipment in various healthcare settings.
	03.30 Describe fire, safety, disaster and evacuation procedures in the various healthcare settings.
	03.31 Discuss applicable accrediting and regulatory agency patient safety guidelines.
04.0	**Documentation:** Demonstrate a fundamental depth, foundational breadth of knowledge of the principles of medical documentation and report writing. The student will be able to:
	04.01 Discuss applications of technology in healthcare.
	04.02 Demonstrate basic computer skills.
	04.03 Interpret and utilize information from electronic health records.
	04.04 Identify methods of electronic communication to access and distribute data.
	04.05 Describe the use and importance of properly written communication and patient care documentation.
	04.06 Explain the legal implication of the patient care report.

	04.07 Supporting medical necessity (S,S).
	04.08 Identify the minimum dataset reference patient information and administrative information on the patient care report.
	04.09 Understand how to document refusal of care, including legal implications.
	04.10 Discuss the implications of the Health Insurance Portability and Accountability Act of 1996 on confidential documentation.
	04.11 Describe the special considerations concerning mass casualty incident documentation.
	04.12 Demonstrate completion of a patient care report for a medical and trauma patient.
05.0	**EMS System Communication:** Demonstrate a simple depth, simple breadth of knowledge of the EMS communication system, communication with other health care professionals, and team communication. The student will be able to:
	05.01 Understand the basic principles of the various types of communications equipment used in EMS.
	05.02 Describe the use of radio communication and correct radio procedures, including the proper methods of initiating and terminating the radio call/transmission.
	05.03 Explain the rationale for providing efficient and effective radio communications and patient reports.
	05.04 Identify the essential components of the verbal report and legal aspects that need to be considered.
	05.05 Perform an organized and concise radio transmission.
	05.06 Team communication and dynamics (S,S).
	05.07 Perform an organized, concise verbal patient report that would be given to the staff at a receiving facility.
	05.08 Perform a brief, organized verbal report that would be given during transfer of care at an incident scene.
06.0	**Therapeutic Communication:** Demonstrate a simple depth, simple breadth of knowledge of the principles of therapeutic communication. The student will be able to:
	06.01 Describe principles of therapeutic and effective communication with patients.
	06.02 Health care literacy (S, S).
	06.03 Non-discriminatory communication that addresses inherent or unconscious bias, is culturally aware and sensitive, and intended to improve patient outcome (S, S).
	06.04 Discuss basic speaking and active listening skills.
	06.05 Recognize the importance of patient/client education regarding healthcare.
	06.06 Discuss the adjustment of communication strategies to effectively communicate with patients with: • Differing age groups

	• Differing developmental stages • Special needs • Differing cultures, including language barriers
06.07	Discuss the communication techniques that should be used to interact with the patient, patient family, bystanders, and individuals from other agencies including verbal diffusion and interview techniques.
06.08	Discuss the strategies for interviewing persons in special situations.
06.09	Distinguish between and respond to verbal and non-verbal cues.
06.10	Analyze elements of communication using a sender-receiver/close loop model.
06.11	Exhibit positive non-verbal behaviors.
06.12	Establish proper patient rapport.
07.0	**Medical/Legal and Ethics:** Demonstrate a fundamental depth, foundational breadth of knowledge of medical legality and ethics. The student will be able to:
07.01	Discuss the rational, importance, and limitations of patient autonomy.
07.02	Differentiate between expressed, implied and involuntary consent.
07.03	Discuss the methods of obtaining consent and procedures for minors.
07.04	Discuss the issues of abandonment, negligence, false imprisonment and battery and their implications to the EMT.
07.05	Discuss the implications for the EMT in patient refusal of care and/or transport.
07.06	Explain the importance, necessity and legality of patient confidentiality.
07.07	Discuss the importance of Do Not Resuscitate [DNR] (advance directives) and local or Florida provisions regarding EMS application.
07.08	Patient rights/advocacy (S, S).
07.09	Discuss State of Florida and Federal special reporting situations including: • Abuse • Sexual assault • Gunshot and knife wounds • Communicable disease • Animal Bites
07.10	Differentiate between civil tort and criminal actions.
07.11	Discuss the elements of negligence and defenses/protections from liability.

	07.12 Discuss the role of the EMT at crime scenes and preservation of evidence.
	07.13 Define ethics and morality and discuss their implication for the EMT.
	07.14 Discuss Florida legislation such as: • Baker Act (FS 394.451) • Marchman Act (FS 397.601 and FS 397.675) • Emergency Examination and Treatment of Incapacitated Persons Act (FS 401.445)
	07.15 Differentiate between the scope of practice and the standard of care as applied to the EMT.
	07.16 Discuss the legal concepts and limitations of immunity, including Good Samaritan statutes and governmental immunity.
	07.17 Describe the appropriate patient management and care techniques in a refusal of care situation.
	07.18 Analyze the relationship between the law, morals and ethics in EMS and the premise that should under lie the EMTs ethical decisions.
	07.19 Describe the criteria necessary to honor an advance directive.
	07.20 Explain the rationale for the needs, benefits and varying degrees of advance directives.
08.0	**Anatomy and Physiology**: Demonstrate a fundamental knowledge of the anatomy and function of all human systems to the practice of EMS. The student will be able to:
	08.01 Identify the following topographic terms: • Medial • Lateral • Proximal • Distal • Superior • Inferior • Anterior • Posterior • Midline • Right and left • Mid-clavicular • Bilateral • Mid-axillary
	08.02 Describe the life support chain, aerobic metabolism, and anaerobic metabolism.
	08.03 Define anatomy, physiology, pathophysiology, and homeostasis.
	08.04 Identify and describe the anatomical structures and functions of the following:

• skeletal system • Muscular system • Respiratory System • Circulatory/ Cardiovascular system • Nervous System • Integumentary system • Digestive system • Endocrine system • Renal system • Reproductive system • Lymphatic System
08.05 Explain cellular anatomy and physiology.
08.06 Explain cellular respiration.
08.07 Discuss cell division.
08.08 Describe the different types of muscle tissues including skeletal, smooth and cardiac.
08.09 Name and identify the location of the bones of the axial and appendicular skeleton.
08.10 Describe the classification and types of joints.
08.11 Discuss the mechanisms of breathing including: • mechanical ventilation • pulmonary volumes • dead space • lung compliance
08.12 Explain the diffusion of gases in external and internal respiration.
08.13 Describe oxygen and carbon dioxide transport in the blood.
08.14 Describe nervous and chemical mechanisms that regulate respirations.
08.15 Discuss respiration and acid-base balance.
08.16 Discuss the hemodynamics of blood pressure.
08.17 Discuss the role of nutrition, metabolism and body temperature on body function.
08.18 Describe the causes, advantages, and disadvantages of a fever.

	08.19 Discuss the hypothalamus functions as the thermostat in the body.
09.0	**Medical Terminology:** Demonstrate a fundamental knowledge in the use of medical terminology. The student will be able to:
	09.01 Identify medical terminology word parts such as: • Root words • Prefixes • Suffixes • Combining forms
	09.02 Correctly utilize medical terminology describing each of the following: • Body structures • Functions • Conditions and disorders • Body regions • Cavities • Areas • Landmarks
	09.03 Correctly use medical abbreviations and symbols.
	09.04 Read and understand basic medical documentation in medical records and medical reports.
	09.05 Communicate with healthcare professionals utilizing basic medical terminology.
	09.06 Explain the rationale for using accepted medical terminology correctly.
10.0	**Pathophysiology:** Demonstrate a fundamental knowledge of the causes and pathophysiology of shock and the components of resuscitation. The student will be able to:
	10.01 Discuss signs of irreversible death.
	10.02 Review the anatomy and physiology of the respiratory and cardiovascular systems.
	10.03 Discuss and identify the pathophysiology of respiratory failure and respiratory and cardiac arrest.
	10.04 Understand shock, including pathophysiology, causes, and the signs and symptoms associated with the various types of shock.
	10.05 Discuss the variations in the pathophysiology of shock patients of all ages.
11.0	**Life Span Development:** Demonstrate a fundamental knowledge of life span development to patient assessment and management. The student will be able to:
	11.01 Describe the major physiologic and psychosocial characteristics patients of all ages.
12.0	**Public Health:** Demonstrate a simple knowledge of the principles of illness and injury prevention in emergency care. The student will be

	able to:
	12.01 Define public health and explain the goal of the public health field.
	12.02 Identify the EMS role within the public health field.
	12.03 Discuss basic concepts of epidemiology.
	12.04 Discuss ways of EMS involvement in injury prevention.
	12.05 Identify areas of need for prevention programs in the community.
13.0	**Principles of Pharmacology:** Demonstrate a simple depth, simple breadth of knowledge of pharmacology, medication safety, and medication types used during an emergency. The student will be able to:
	13.01 Explain the "rights" of medication administration and describe how each one related to EMS.
	13.02 Discuss and differentiate the various medication forms and the appropriate routes of administration
	13.03 Describe the difference between a generic medication name and trade name and provide an example of each.
	13.04 Specific medication classes to be determined locally • Class names (S, S) • Class indications (S, S) • Class complications (S, S) • Class side effects (S, S) • Polypharmacy (S, S)
	13.05 Discuss the components and elements of a drug profile including: • Class • Actions • Contraindications • Side effects • Dose • Route • Adverse drug reactions (S, S) • Medication response relationships (F,F)
	13.06 Describe the role of medical direction in medication administration and explain the difference between direct orders (online) and standing orders (off-line).
14.0	**Pharmacology:** Demonstrate a fundamental depth, simple breadth of knowledge of emergency medications within the scope of practice of the EMT. The student will be able to:
	14.01 State the following for each medication that can be administered by an EMT as dictated by the State of Florida and local medical direction:

- Medication safety
- Medication legislation
- Naming
- Classifications
- Storage and security
- Medication interactions
- Adverse drug reactions
- Metabolism and excretion
- Mechanism of action
- Medication response relationships

14.02 State the following for each medication that can be administered by an EMT as dictated by the State of Florida and local medical direction (Acute Medications):

- Generic / Trade Names, Drug Classifications
- Effects
- Actions
- Indication
- Contraindications
- Complications
- Routes of administration
- Side effects
- Interactions
- Doses of medications

14.03 Demonstrate the steps in properly inspecting each type of medication. (Medication Administration)

- Use a Medication Cross Check procedure
- Use an autoinjector
- Use a unit-dose, premeasured intranasal device
- Administer medications to a patient
- Provide pain management, including ethical and safety considerations
- Routes of administration

14.04 Discuss the difference between administration versus assistance of patient medications. (Chronic or Maintenance Medications)

- Class names
- Class indications
- Class complications
- Class side effects
- Polypharmacy

15.0 **Respirations:** Demonstrate a fundamental depth, foundational breadth of knowledge of respiration. The student will be able to:

15.01 Anatomy of the Respiratory System and review the pulmonary ventilation process to include mechanics of ventilation and alveolar

	ventilation (tidal volumes, dead space, etc.): • Control of respirations • Mechanics of respiration • Pulmonary ventilation • Oxygenation • Mechanical ventilation
15.02	Physiology and pathophysiology of respiration • Pulmonary ventilation • Oxygenation • Respiration • External • Internal • Cellular
15.03	Demonstrate the correct operation of oxygen tanks and regulators.
15.04	Describe the following regarding supplemental oxygen delivery devices: • Indications • Contraindications • Advantages • Disadvantages • Complications • Liter flow range • Concentration of delivered oxygen • Procedures • Purpose • Components
15.05	Demonstrate the use of low, medium, high, and variable concentration oxygen delivery devices for all age groups.
15.06	Describe assessment and management for adequate and inadequate respiration, including the use of pulse oximetry and capnography.
15.07	Explain the rationale for providing adequate oxygenation through high inspired oxygen concentrations to patients who, in the past, may have received low concentrations.
15.08	Discuss the use of an oxygen humidifier and the requirements needed for its use.
15.09	Discuss the differences between negative pressure and positive pressure ventilation.
16.0	**Airway Management:** Demonstrate a fundamental depth, foundational breadth of knowledge of airway management patients of all ages within the scope of practice of the EMT. The student will be able to:
16.01	Review the structures and functions of the Anatomy of the Airway and the Respiratory System (Include age- related variations in pediatric and geriatric patients).

	• Normal • Abnormal • Special Considerations (MDI, In-Line Neb, Simple Face Mask, Venturi, CPAP/BiPAP)
16.02	Describe appropriate assessment of the airway and the management for a patient with or without adequate breathing (Include age-related variations in pediatric and geriatric patients).
16.03	Describe the Techniques of assuring a patent airway, indications for airway management, and demonstrate the steps in performing the head-tilt chin-lift and jaw thrust in all age groups (Include age- related variations in pediatric and geriatric patients). • Demonstrate the techniques of suctioning. • Demonstrate relief of FBAO. • Demonstrate how to insert an oral and nasal -airway adjunct. • Demonstrate how to insert both esophageal and supra-glottic airways.
17.0	**Artificial Ventilations:** Demonstrate a fundamental depth, foundational breadth of knowledge of assessment and management utilizing ventilation patients of all ages. The student will be able to:
17.01	Effect of ventilation on cardiac output • E.g., Bag Valve Mask, Ventilator, CPAP, Hyper Mechanical Inflation
17.02	Demonstrate how to ventilate a patient with a pocket mask.
17.03	Demonstrate the safe and effective ventilation for a patient with a BVM for one or two rescuers using oral-nasal adjuncts with appropriate airway positioning.
17.04	Discuss the signs of adequate and inadequate ventilation using the BVM.
17.05	Describe the steps involved in performing a comprehensive assessment of ventilations.
17.06	Demonstrate how to ventilate a patient with a stoma.
17.07	Demonstrate the use of various devices used in the assessment of supra-glottic airway placement.
17.08	Describe the following for a patient with an automatic transport ventilator (ATV): • Indications • Contraindications • Advantages • Disadvantages • Complications • Technique for ventilating
17.09	Describe the following for a patient with a CPAP: • Indications • Contraindications • Advantages • Disadvantages • Complications

	• Technique for ventilating
18.0	**Scene Size-Up:** Demonstrate a fundamental depth, foundational breadth of knowledge of scene management and multiple patient situations**.** The student will be able to:
18.01	Recognize and describe hazards/potential hazards at the scene.
18.02	Discuss common mechanisms of injury/nature of illness.
18.03	Discuss the priority considerations for multiple-patient situations.
18.04	Explain why it is important for the EMT to anticipate and determine the need of appropriate Scene management including but not limited to traffic incident management, additional resources, or specialty resources.
18.05	Discuss the importance of continuous scene assessment to ensure safety of the EMS Impact of the environment on team and the patient care.
18.06	Explain why it is important for the EMT to anticipate and determine the need for additional or specialized resources.
18.07	Discuss the importance of continuous scene assessment to ensure safety of the EMS team and the patient.
18.08	Discuss the minimum standard precautions that should be followed and PPE that should be worn as appropriate.
18.09	Discuss special considerations for dealing with a violent scene.
18.10	Explain the rationale for crew members to evaluate scene safety prior to entering.
18.11	Explain how patient situations affect your evaluation of mechanism of injury or illness.
19.0	**Primary Assessment:** Demonstrate a fundamental depth, simple breadth of knowledge of the primary assessment for all patient situations. The student will be able to:
19.01	Summarize the elements of a general impression of the patient.
19.02	Explain the reason for performing a primary assessment.
19.03	Discuss and demonstrate methods of assessing level of responsiveness using AVPU.
19.04	Discuss and demonstrate methods of assessing the airway and providing airway care patients of all ages.
19.05	Describe and demonstrate methods used for assessing if a patient is breathing patients of all ages.
19.06	Differentiate between a patient with adequate and inadequate breathing.
19.07	Describe and demonstrate the methods used to obtain a pulse patients of all ages.
19.08	Discuss and demonstrate assessing the patient for external bleeding.

	19.09 Describe and demonstrate the assessment and interpretation of skin color, temperature, moisture and capillary refill patients of all ages.
	19.10 Explain the reasons prioritizing a patient for care and transport.
	19.11 Describe when it is appropriate to expose the patient completely.
	19.12 Differentiate between critical life-threatening, potentially life- threatening, and non-life-threatening patient presentations.
20.0	**History-Taking:** Demonstrate a fundamental depth, foundational breadth of knowledge of the components of history taking. The student will be able to:
	20.01 Determine and investigate the chief complaint (MOI/NOI).
	20.02 Describe components of the patient history.
	20.03 Explain the importance of obtaining a SAMPLE and OPQRST history.
	20.04 Acknowledge the feelings patients experience during assessment.
	20.05 Discuss the value of obtaining a family and social history.
	20.06 Describe examples of different techniques the EMT may use to obtain information from patients, family or bystanders during the history taking process.
21.0	**Secondary Assessment:** Demonstrate a fundamental depth, foundational breadth of knowledge of techniques used for a secondary assessment. The student will be able to:
	21.01 Discuss the components and techniques of the physical exam and skills involved.
	21.02 Discuss the indications for performing: • Rapid assessment • Focused exam • Head to toe exam
	21.03 Demonstrate: • Rapid exam • Focused exam • Head to toe exam
	21.04 Describe and demonstrate the techniques of inspection, palpation, percussion, and auscultation. • Respiratory system including breath sound quality • Cardiovascular system • Neurological system • Musculoskeletal system • Major anatomical regions
	21.05 Describe and demonstrate the importance of obtaining a baseline set of vital signs.

	• E.g., Non-Invasive Blood Pressure, Blood Glucose, Temperature …
	21.06 Discuss blood pressure ranges patients of all ages.
22.0	**Monitoring Devices:** Demonstrate a simple depth, simple breath of knowledge of monitoring devices within the scope of practice of the EMT. The student will be able to:
	22.01 Describe and demonstrate the purpose, indications, procedure, normal findings, and limitations of the following patient monitoring technologies. • Pulse oximetry • Glucometry • Capnography • Noninvasive BP monitoring • Thermometry • Telemetry • Cardiac monitoring – 12 lead ECG acquisition and transmission
	22.02 Demonstrate proper placement of a cardiac monitor and diagnostic ECG leads.
23.0	**Reassessment:** Demonstrate a fundamental depth, foundational breadth of knowledge of how and when to perform a reassessment for all patient situations. The student will be able to:
	23.01 Describe the components of reassessment and demonstrate the skills involved.
	23.02 Discuss the reasons for repeating the primary assessment as part of the reassessment.
	23.03 Explain trending assessment components and its value to other health professionals who assume care of the patient.
	23.04 Demonstrate the reassessment of patients of all ages.
24.0	**Medical Overview:** Demonstrate a simple depth, foundation breadth of knowledge of pathophysiology, assessment and management of medical complaints. The student will be able to:
	24.01 Pathophysiology, assessment, and management of a medical complaints to include • Identify factors that affect the patient Transport Decision and Medically Appropriate Destination • E.g., Scene Safety, Environmental Factors, Chief Complaint, Preconceptions.
	24.02 Discuss forming a field impression and utilizing available information to determine a differential diagnosis.
25.0	**Neurology:** Demonstrate a fundamental depth, foundational breadth of knowledge of the assessment and management of neurologic disorders/emergencies patients of all ages. The student will be able to:
	25.01 Review the anatomy and physiology of the nervous system.
	25.02 Describe the pathophysiology of the following neurologic disorders: • Altered mental status • Stroke

	• Transient ischemic attack • Headache • Seizures • Syncope • Dementia vs. delirium • Alzheimer's disease • Headache • Brief Resolved Unexplained Event (BRUE) • Other neurological disorders to be determined locally
25.03	Discuss and identify the causes, signs and symptoms of ischemic strokes, hemorrhagic strokes, and transient ischemic attacks and their similarities and differences.
25.04	Discuss and demonstrate how to use a stroke scoring system in the assessment of patients with suspected stroke.
25.05	Define and differentiate generalize seizure, partial seizure and status epilepticus and list their possible causes.
25.06	Define and differentiate migraine headache, sinus headache, tension headache and discuss how to distinguish harmless headaches from something more serious.
25.07	Define "altered mental status" and identify the possible causes.
25.08	Describe and demonstrate the assessment and management of the patient with various neurological emergencies in patients of all ages to include: • Strokes • Headaches • Seizures • Altered mental status
25.09	Discuss the transport of the stroke patient to the appropriate treatment center.
26.0	**Abdominal and Gastrointestinal Disorder:** Demonstrate a fundamental depth, foundational breadth of knowledge of the assessment and management of abdominal and gastrointestinal disorders/emergencies patients of all ages. The student will be able to:
26.01	Review the basic anatomy and physiology the gastrointestinal, genital and urinary systems.
26.02	Define and describe the pathophysiology of the following abdominal and gastrointestinal disorders: • Abdominal pain • Acute abdomen • Peritonitis • Appendicitis • Pancreatitis • Cholecystitis • Gastrointestinal bleeding • Esophageal varices

	• Gastroenteritis • Ulcers • Intestinal obstruction • Hernia • Abdominal aortic aneurysm
	26.03 Identify the signs and symptoms of common GI disorders.
	26.04 Describe and demonstrate the assessment and management of the patient with various gastrointestinal emergencies.
	26.05 Differentiate between hemorrhagic and non-hemorrhagic abdominal pain.
27.0	**Immunology:** Demonstrate a fundamental depth, foundational breadth of knowledge of the assessment and management of immunology disorders/emergencies patients of all ages. The student will be able to:
	27.01 Define and differentiate allergic reaction and anaphylaxis.
	27.02 Describe the pathophysiology of the following immunology disorders: • allergic reaction • anaphylaxis • anaphylactic shock
	27.03 Describe and demonstrate the assessment and management of the patient in patients of all ages experiencing an allergic or anaphylactic reaction.
	27.04 Review the following for the epinephrine auto-injector: • generic and trade names • medication forms • dose • administration • action • contraindications
	27.05 Demonstrate the use of epinephrine auto-injector.
	27.06 Review the anatomy and physiology of the organs and structures related to anaphylaxis.
	27.07 Describe the incidence, morbidity and mortality of anaphylaxis.
	27.08 Recognize the signs and symptoms related to anaphylaxis.
	27.09 Describe the risk factors for and prevention of anaphylaxis and appropriate patient education.
	27.10 Discuss common antigens most frequently associated with anaphylaxis.
	27.11 Explain the importance of separating the patient from the allergen when possible.

28.0	**Infectious Disease:** Demonstrate a simple depth, simple breadth of knowledge of the assessment and management of a patient who may have an infectious disease patients of all ages. The student will be able to:
	28.01 Discuss the causes of infectious diseases
	28.02 Describe the pathophysiology of infectious diseases of significant public health concern.
	28.03 Describe and demonstrate the assessment and management of the patient in patients of all ages experiencing an infectious disease.
	28.04 Discuss mandatory notification to state or federal agencies of various diseases.
	28.05 Identify patients with risk factors for infectious disease.
	28.06 Explain the principles and practices of infection control in prehospital care.
	28.07 Describe and discuss the rationale for the various types of PPE.
	28.08 Discuss the proper disposal of contaminated supplies (sharps, gauze sponges, tourniquets, etc.).
	28.09 Discuss decontamination of the ambulance and disinfection of patient care equipment, and areas in which care of the patient occurred.
	28.10 Describe the actions to take if the EMS provider is exposed to an infectious disease.
	28.11 Demonstrate the ability to comply with body substance isolation guidelines.
	28.12 Discuss the pathophysiology, risk factors, assessment, and prehospital management of sepsis/systemic inflammatory response syndrome (SIRS)
	28.13 Identify the signs and symptoms and discuss the assessment and prehospital management of a patient in septic shock.
	28.14 Describe the risk factors for and prevention of infectious disease and appropriate patient education (including but not limited to hand-washing, PPE use, and disposal of contaminated supplies).
29.0	**Endocrine Disorders:** Demonstrate a fundamental depth, foundational breadth of knowledge of the assessment and management of endocrine disorders/emergencies patients of all ages. The student will be able to:
	29.01 Review the anatomy and physiology of the endocrine system and its main function in the body.
	29.02 Describe the pathophysiology and signs and symptoms of the following endocrine disorders: • Insulin dependent Diabetes Mellitus • Non-insulin dependent Diabetes Mellitus • Hypoglycemia • Hyperglycemia • Diabetic Ketoacidosis (DKA) • Hyperglycemic Hyperosmolar Non-ketotic Syndrome (HHNS)
	29.03 Define and differentiate between Type I and Type II Diabetes.

	29.04	Identify and demonstrate the steps in the management of the patient taking diabetic medicine with an altered mental status and a history of diabetes. Patients of all ages.
	29.05	Review the following for oral glucose: • Generic and trade names • Medication forms • Dose • Administration • Action • Contraindications
	29.06	Demonstrate the steps of using a glucometer device and administering oral glucose.
	29.07	Describe and demonstrate the assessment and the management of the patient experiencing an endocrinologic emergency to include hypo- and hyper-glycemia.
	29.08	Discuss the general assessment findings associated with endocrinologic emergencies. Patients of all ages.
	29.09	Describe the risk factors for and prevention of endocrine emergencies, including but not limited to healthy lifestyles and modifiable risk factors, the use of blood sugar monitoring devices and self-administration of prescribed medications.
30.0	**Psychiatric:** Demonstrate a fundamental depth, foundational breadth of knowledge regarding the assessment and management of psychiatric emergencies patients of all ages. The student will be able to:	
	30.01	Differentiate among behavior, psychiatric disorders and behavioral emergencies
	30.02	Discuss common psychiatric disorders and behavioral emergencies.
	30.03	Discuss the general factors that may cause an alteration in a patient's behavior.
	30.04	Discuss patterns of violence, abuse, and neglect.
	30.05	Discuss the risk factors/signs or symptoms of various psychiatric emergencies to include acute psychosis, suicide ideation, excited delirium, anxiety, depression, medical fear, substance use disorder, and PTSD.
	30.06	Manage a behavioral emergency scenario applying knowledge of medical/legal Florida Statutes.
	30.07	Describe and demonstrate the assessment and management of the patient experiencing a behavioral or psychiatric emergency across patients of all ages.
	30.08	Describe the biological, psychosocial, and sociocultural influences on psychiatric disorders.
	30.09	Describe the special considerations for the safety of the EMS provider and EMS crew, the patient and bystanders when dealing with behavioral and psychiatric emergencies.
	30.10	Describe and demonstrate methods of restraint that may be used in the management of a patient with a behavioral emergency.
	30.11	Explain the importance of provider behavior and communication in the care of a patient with a behavioral emergency.

	30.12 Demonstrate an understanding of appropriate and available mental health resources and provide patient education.
31.0	**Cardiovascular**: Demonstrate a fundamental depth, foundational breadth of knowledge of the assessment and management of cardiovascular emergencies patients of all ages. The student will be able to:
	31.01 Review the basic anatomy and physiology of the cardiovascular system.
	31.02 Describe the pathophysiology and signs and symptoms of the following cardiovascular disorders: • Acute coronary syndrome • Angina pectoris • Thromboembolism • Myocardial infarction • Hypertensive emergencies • Aortic aneurysm/dissection • Left and right sided heart failure • Cardiogenic shock • Cardiac arrest
	31.03 Describe and demonstrate the assessment and management of the patient experiencing a cardiac emergency.
	31.04 Discuss the indications and contraindications for automated external defibrillation (AED).
	31.05 Explain the impact of age and weight on defibrillation.
	31.06 Discuss the position of comfort for patients with various cardiac emergencies.
	31.07 Explain the rationale for early defibrillation.
	31.08 Discuss and differentiate among various types of external defibrillators.
	31.09 Discuss and differentiate among the various types of implanted cardiac devices.
	31.10 Understand the importance of maintenance and operators check list for AED's.
	31.11 Demonstrate the ability to use an AED according to the latest American Heart Association (AHA) guidelines.
	31.12 Explain the role medical direction plays in the use of automated external defibrillation.
	31.13 Explain the rationale for administering nitroglycerin and ASA to a patient with chest pain or discomfort.
	31.14 Demonstrate the assessment and documentation of patient response to the automated external defibrillator.
	31.15 Demonstrate the assessment and documentation of patient response to nitroglycerin.
	31.16 Discuss the purpose and use of CPR assist devices.

	31.17 Describe the risk factors for and prevention of cardiac related diseases and provide appropriate patient education.
	31.18 Discuss the signs and symptoms of acute coronary syndrome and provide appropriate patient education to include self-administration of prescribed medications.
32.0	**Toxicology:** Demonstrate a fundamental depth, foundational breadth of knowledge of the assessment and management of toxicological (poisoning and overdose) emergencies patients of all ages. The student will be able to:
	32.01 Define and differentiate among toxicology, poisoning, and overdose.
	32.02 Describe the pathophysiology and signs and symptoms of the following toxicological emergencies, including but not limited to: • Food poisoning • Carbon monoxide poisoning • Cyanide poisoning • Exposure to acid or alkaline substances • Exposure to hydrocarbons • Methanol ingestion • Isopropanol ingestion • ethylene glycol ingestion • Exposure to poisonous plants • Drug withdrawal • Alcoholic syndrome • Withdrawal syndrome (including delirium tremens) • Illicit drug use • Medication overdose • Opioid overdose • Organa phosphate overdose • Nerve agents
	32.03 Discuss various ways that toxins enter the body. Including inhalation, ingestion, injection, and absorption.
	32.04 Discuss and demonstrate the assessment and management for the patient with a toxicological emergency.
	32.05 Discuss the role of the Poison Control Center with the nationwide contact number 800-222-1222 in the United States.
	32.06 Explain the rationale for contacting medical direction early in the prehospital management of a patient with a toxicological emergency.
	32.07 Review the following for Narcan (naloxone): • Generic and trade names • Medication forms • Dose • Administration • Action

	• Contraindications
32.08	Discuss the use of medication assisted treatments for substance misuse disorders including suboxone, methadone, and naltrexone and potential complications.
32.09	Discuss safe uses and practices with potentially toxic substances while providing appropriate patient education
33.0	**Respiratory:** Demonstrate a fundamental depth, foundational breadth of knowledge of the assessment and management of respiratory disorders/emergencies patients of all ages The student will be able to:
33.01	Review the basic anatomy and physiology of the respiratory system.
33.02	Describe the pathophysiology and signs and symptoms of the following respiratory disorders: • Chronic Obstructive Pulmonary Disease • Asthma • Bronchiolitis • Pulmonary Edema • Spontaneous Pneumothorax • Hyperventilation Syndrome • Cystic Fibrosis • Pulmonary Embolism • Pneumonia • Viral Respiratory Infections • Poisonous Exposures • Bacterial respiratory infections
33.03	Discuss signs of adequate air exchange.
33.04	Discuss the signs and symptoms of a patient across the continuum from respiratory distress to failure.
33.05	Describe and demonstrate the assessment and management of the patient with a respiratory emergency. Patients of all ages.
33.06	Review the following for the metered-dose inhalers and small volume nebulizers for medications within the scope of practice of the EMT: • Generic name • Medication forms • Dose • Administration • Action • Indications • Contraindications
33.07	Describe and demonstrate the steps in facilitating the use of an inhaler and a small volume nebulizer.

	33.08 Differentiate between upper and lower airway obstruction.
	33.09 Demonstrate assessment and interpretation of normal and abnormal lung and breath sounds. Patients of all ages.
	33.10 Discuss common respiratory disorders, self-administered medications, and equipment (including, but not limited to home oxygen, nebulizers, and CPAP) and provide appropriate patient education.
34.0	**Hematology:** Demonstrate a simple depth, simple breadth of knowledge of the assessment, and management of hematology disorders patients of all ages. The student will be able to:
	34.01 Review the compositions and functions of blood and plasma.
	34.02 Describe the pathophysiology of the following hematology disorders: • Anemia • Sickle Cell Anemia / Sickle Cell Crisis • Hemophilia/Clotting disorders
	34.03 Describe and demonstrate the assessment and the management of the patient with a hematological disorder. Patients of all ages.
	34.04 Discuss signs, symptoms, and potential complications of various hematological disorders and provide appropriate patient education
35.0	**Genitourinary /Renal:** Demonstrate a simple depth, simple breath of knowledge of the assessment and management of genitourinary/ renal emergency patients of all ages. The student will be able to:
	35.01 Review the basic anatomy and physiology of the genitourinary and renal systems.
	35.02 Describe the pathophysiology and signs and symptoms of the following genitourinary/ renal disorders: • Urinary tract infection • Kidney stones • Kidney failure
	35.03 Discuss the basic principles and complications of kidney dialysis.
	35.04 Discuss the recognition and complications of urinary catheters.
	35.05 Describe and demonstrate the assessment and management of the patient with a dialysis emergency.
	35.06 Discuss traumatic injuries to the genitourinary system, including, but not limited to: sexual assault (female and male).
36.0	**Gynecology:** Demonstrate a fundamental depth, foundational breadth of knowledge of the assessment and management of gynecologic emergencies patients of all ages. The student will be able to:
	36.01 Review the basic anatomy and physiology of the female reproductive system.
	36.02 Describe the pathophysiology and signs and symptoms of the following gynecologic disorders and emergencies, including but not limited to: • Sexual assault • Non-traumatic vaginal bleeding

		• Menstrual pain • Ovarian cyst • Endometritis • Endometriosis • Pelvic inflammatory disease • Sexually Transmitted Disease
	36.03	Describe and demonstrate the assessment and management of the patient experiencing a gynecologic emergency. Patients of all ages.
	36.04	Describe the assessment and management of a patient who has experienced a sexual assault including the psychosocial impact and assessment findings/presentations.
	36.05	Discuss the professional and psychological importance of maintaining a patient's modesty and privacy while still being able to obtain necessary information.
	36.06	Discuss the need to provide care for a patient of sexual assault, while still preventing destruction of crime scene information.
37.0	**Non-Traumatic Musculoskeletal Disorders:** Demonstrate a fundamental depth, foundational breadth of knowledge of the assessment and management of non-traumatic fractures patients of all ages. The student will be able to:	
	37.01	Review the basic anatomy and physiology of the musculoskeletal system.
	37.02	Describe and demonstrate the assessment and management of the patient in all age groups with a non-traumatic musculoskeletal emergency.
38.0	**Diseases of the Eyes, Ears, Nose, and Throat:** Demonstrate a simple depth, simple breadth of knowledge of assessment and management of diseases of the Eyes, Ears, Nose, and Throat patients of all ages. The student will be able to:	
	38.01	Describe and demonstrate the assessment and management of the patient in all age groups with abnormal conditions affecting the eyes, ears, nose and throat, including epistaxis.
39.0	**Shock and Resuscitation:** Demonstrate a fundamental knowledge of the causes, pathophysiology, and management of shock and respiratory failure patients of all ages. The student will be able to:	
	39.01	Discuss and identify causes and pathophysiology of the categories of hemorrhage and shock.
	39.02	Review causes and pathophysiology of respiratory failure and arrest.
	39.03	Review causes and pathophysiology of cardiac failure or arrest.
	39.04	Discuss the various types and degrees of shock.
	39.05	Discuss post resuscitation management.
	39.06	Explain the system components of CPR, the links in the AHA chain of survival and how each relates to patient survival.
	39.07	Define and differentiate between compensated and decompensated shock.
	39.08	Discuss the importance of teamwork in the successful management of the critical patient.

	39.09 Demonstrate how to perform one and two rescuer CPR, adult, child, and infant.
	39.10 Demonstrate how to perform rescuer level appropriate defibrillation in an adult, child, and infant patient.
	39.11 Demonstrate rapid decision making based on differential field diagnosis of the critical patient with a ***special arrest*** peri-arrest condition.
	39.12 Describe and demonstrate the assessment and management of the patient with hemorrhage and shock.
	39.13 Discuss ethical issues in resuscitation.
	39.14 Discuss options for termination resuscitation.
40.0	**Trauma Overview:** Demonstrate a fundamental depth, foundational breadth of knowledge of pathophysiology, assessment and management of the trauma patient patients of all ages. The student will be able to:
	40.01 Discuss pathophysiology of the trauma patient.
	40.02 Discuss the components of a comprehensive trauma systems and levels of trauma centers.
	40.03 Describe the considerations for different transportation modes ***transport and destination issues*** to a trauma center.
	40.04 Discuss the kinematics of blunt and penetrating trauma.
	40.05 Discuss and describe significant and non-significant Mechanism of Injury (MOI) and provide examples of each.
	40.06 Demonstrate the application of the State of Florida's trauma scorecard methodologies as required in Florida Statute and Florida Administrative Code (F.A.C.).
	40.07 Discuss the National Trauma Triage Protocol of injured Patients.
	40.08 Discuss forming a field impression and utilizing available information to determine a differential diagnosis.
	40.09 Identify the need for rapid intervention transport of the trauma patient.
41.0	**Bleeding:** Demonstrate a fundamental depth, foundational breadth of knowledge of pathophysiology, assessment, and management of bleeding patients of all ages. The student will be able to:
	41.01 Review the anatomy and physiology of the circulatory system.
	41.02 Discuss the different types of bleeding and classes of hemorrhage.
	41.03 Review signs and symptoms of shock (hypo-perfusion).
	41.04 Demonstrate effective hemorrhage control to include application of a tourniquet.
	41.05 Review the pathophysiology of hemorrhagic shock.

	41.06 Recognize the need for rapid transport for patients that are bleeding and showing signs of shock (hypo-perfusion).
	41.07 Describe and demonstrate the assessment and management of a patient with hemorrhagic shock.
	41.08 Discuss the possible complications of an improperly applied dressing, bandage, tourniquet, and hemostatic agents.
42.0	**Chest Trauma:** Demonstrate a fundamental depth, simple breadth of knowledge of pathophysiology, assessment and management of chest trauma patients of all ages. The student will be able to:
	42.01 Review the anatomy and physiology of the thoracic/chest cavity and respiratory system.
	42.02 Differentiate between a pneumothorax (open, simple and tension) and hemothorax.
	42.03 Discuss the pathophysiology, signs and symptoms, and MOI of myocardial injuries, including the following: • Pericardial tamponade • Myocardial contusion • Myocardial rupture • Commotio cordis • Aortic sheerer
	42.04 Discuss the pathophysiology, signs and symptoms, and MOI of specific chest wall injuries, including the following: • Rib fracture • Flail segment • Sternal fracture • Open chest wound • Impaled object
	42.05 Describe and demonstrate the assessment and management of chest trauma ***to include blunt versus penetrating trauma.***
43.0	**Abdominal and Genitourinary Trauma:** Demonstrate a fundamental depth, simple breadth of knowledge of pathophysiology, assessment and management of abdominal and genitourinary trauma patients of all ages. The student will be able to:
	43.01 Review the anatomy and physiology of the abdominal cavity and genitourinary system.
	43.02 Discuss the pathophysiology, signs and symptoms, and MOI for abdominal trauma including hallow and solid injuries.
	43.03 Describe and demonstrate the assessment and management of a patient with a suspected abdominal or genitourinary injury/trauma.
44.0	**Orthopedic Trauma:** Demonstrate a fundamental depth, foundational breadth of knowledge of pathophysiology, assessment, and management of orthopedic trauma patients of all ages. The student will be able to:
	44.01 Review the anatomy and physiology of the Musculo-skeletal system.
	44.02 Discuss pathophysiology, signs and symptoms, and MOI for orthopedic trauma including *evisceration, impaled objects, blunt versus penetrating mechanisms*, h***o***llow and solid ***organ*** injuries.
	44.03 Discuss the different types of orthopedic trauma including fracture classifications. To include internal/external genitalia.

	44.04 Explain the rationale for stabilization of an injured extremity. To include: • Open fracture • Closed fracture • Dislocation • Upper and Lower extremity orthopedic trauma • Sprains and Strains • Pelvic Fracture
	44.05 Describe and demonstrate the assessment and management of a patient with a suspected orthopedic trauma.
	44.06 Discuss the following management techniques: • Heat therapy • Cold therapy • Splinting
	44.07 List the six “P’s” of orthopedic injury assessment.
	44.08 Discuss the need for assessment of distal pulses, motor, and sensation before and after splinting.
	44.09 Review age-associated changes in the bones.
	44.10 Discuss the proper procedures to package an amputated body part for replantation.
	44.11 Explain the rationale for splinting at the scene versus load and go.
	44.12 Demonstrate the proper use of various splinting materials and devices to include improvised and traction splints.
45.0	**Soft Tissue Trauma:** Demonstrate a fundamental depth, foundational breadth of knowledge of pathophysiology, assessment, and management of soft tissue trauma patients of all ages. The student will be able to:
	45.01 Review anatomy and physiology of the integumentary system to include the layers of the skin.
	45.02 Describe the pathophysiology, signs and symptoms, and MOI of soft tissue trauma.
	45.03 Describe and demonstrate the assessment and management of various soft tissue injuries. • Wounds (e.g., avulsion, bite, laceration, puncture, and incisions) • Crush and compartment syndrome • High pressure injection injury
	45.04 Identify types of burn injuries, including: • Thermal burn • Chemical burn • Electrical burn • Radiation exposure
	45.05 Describe the depth classifications of burn injuries, including:

	• Superficial burn • Partial-thickness burn • Full-thickness burn • Other depth classifications
	45.06 Describe and demonstrate methods for determining body surface area percentage of a burn injury including the “rule of nines," the "rule of palms," and other methods.
	45.07 Explain how the seriousness of a burn is related to its depth and percent of body surface area (BSA) involved.
	45.08 Review the various management techniques for hemorrhage control.
	45.09 Differentiate among the types of injuries requiring the use of an occlusive versus non- occlusive dressing.
	45.10 Demonstrate the assessment and management of specific burn injuries including: • Thermal • Inhalation • Chemical ***(in the eye and on the skin)*** • Electrical • Radiation
46.0	**Head, Facial, Neck, and Spine Trauma:** Demonstrate a fundamental depth, foundational breadth of knowledge of pathophysiology, assessment, and management of head, facial, neck and spine trauma patients of all ages. The student will be able to:
	46.01 Review the anatomy and physiology of the head, face, neck and spine.
	46.02 Describe the pathophysiology, signs and symptoms, and MOI for head, face, neck, and spine trauma.
	46.03 Describe and demonstrate the assessment and management of a patient with the following traumas to the head, face, neck, and spine: • Penetrating neck trauma • Laryngotracheal injury • Skull fracture • Facial fracture • Eye injury (foreign body) • Dental trauma
	46.04 Recognize and manage life threats due to face, head, neck, and spine trauma.
	46.05 Discuss and demonstrate the utilization of the Glasgow Coma Scale.
47.0	**Nervous System Trauma:** Demonstrate a fundamental depth, foundational breadth of knowledge of pathophysiology, assessment, and management of nervous system trauma patients of all ages. The student will be able to:
	47.01 Review the anatomy and physiology of the nervous system.

	47.02 Discuss the pathophysiology, signs and symptoms, and MOI for ***traumatic*** brain ***injury (TBI)*** and spinal cord trauma.
	47.03 Describe and demonstrate the assessment and management of a patient with a ***traumatic*** brain ***injury (TBI)*** and/or spinal cord trauma.
	47.04 Discuss the rationale and potential complications of spinal motion restriction of the entire spine when a cervical spine injury is suspected.
	47.05 Given a scenario, discuss whether or not to remove a helmet prior to transport of a patient.
	47.06 Demonstrate various methods for stabilization and removal of a helmet.
	47.07 Discuss documentation of assessment before, during, and after spinal motion restriction.
48.0	**Special Considerations in Trauma:** Demonstrate a fundamental depth, foundational breadth of knowledge of pathophysiology, assessment and management of trauma patients with special considerations patients of all ages. The student will be able to:
	48.01 Review the anatomy and physiology for the following trauma patients: • Pregnant • Pediatric • Geriatric
	48.02 Discuss the pathophysiology, signs and symptoms, and MOI of trauma in the following patients: • Pregnant • Pediatric • Geriatric
	48.03 Discuss and demonstrate unique assessment and management considerations for the following trauma patients: • Pregnant • Pediatric • Geriatric • Cognitively impaired
49.0	**Environmental Emergencies:** Demonstrate a fundamental depth, foundational breadth of knowledge of pathophysiology, assessment and management of environmental emergencies patients of all ages. The student will be able to:
	49.01 Define drowning and discuss its incidence, rick factors and prevention.
	49.02 Discuss the pathophysiology, signs and symptoms, and MOI of the following: • Drowning and water related incidents • Temperature-related illness • Bites and envenomation • Dysbarism such as high-altitude injuries • Diving injuries • Lightning (electrical) injury • High altitude illness • Radiation exposure

	• Other environmental emergencies
	49.03 Describes and demonstrate the assessment and management for a patient with the following: • Drowning and water related incidents • Temperature-related illness • Bites and envenomation • Dysbarism such as high-altitude injuries • Diving injuries • Lightning (electrical) injury • High altitude illness • Radiation exposure • Other environmental emergencies
	49.04 Discuss the fundamental principles of the gas laws including Boyle's, Dalton, Henry and Charles.
	49.05 Discuss scene management and provider safety considerations for a variety of environmental emergencies.
	49.06 Explain the five ways a body can lose heat.
	49.07 Discuss potentially life-threatening venomous species of insects, spiders and snakes in the U.S.
50.0	**Multi-Systems Trauma:** Demonstrate a fundamental depth, foundational breadth of knowledge of the pathophysiology, assessment, and management of multi-system trauma and blast injuries patients of all ages. The student will be able to:
	50.01 Discuss the pathophysiology, signs and symptoms, and MOI of multi-system trauma and blast injuries.
	50.02 Describe and demonstrate assessment and management considerations for a patient of multi system trauma and blast injuries.
51.0	**Obstetrics:** Demonstrate a fundamental depth, foundational breadth of knowledge of management of the obstetric patient within the scope of practice of the EMT. The student will be able to:
	51.01 Identify and describe the anatomical and the physiological changes during pregnancy.
	51.02 Define the stages of labor and discuss how to assess them.
	51.03 Differentiate between cephalic and abnormal delivery.
	51.04 Describe the management of a patient with pre-delivery emergencies.
	51.05 Discuss and demonstrate the patient care measures for all stages of labor in a cephalic delivery for the mother and the newborn.
	51.06 Describe the management of the mother post-delivery.
	51.07 Discuss and demonstrate the patient care measures for all stages of labor in abnormal deliveries for the mother and the newborn.

	51.08 Describe the procedures for handling complications of delivery.
	51.09 Describe special considerations when meconium is present in amniotic fluid or during delivery.
	51.10 Identify the factors that lead to premature birth and low birth weight newborns.
	51.11 Demonstrate the procedures for handling complications of pregnancy including pre-eclampsia, eclampsia, and high risk.
52.0	**Neonatal Care:** Demonstrate a fundamental depth, foundational breadth of knowledge of management of the newborn and neonatal patient within the scope of practice of the EMT. The student will be able to:
	52.01 Discuss and demonstrate assessment and management considerations of a neonate.
	52.02 Define the term neonate.
	52.03 Describe special patient care considerations of a premature baby.
	52.04 Calculate the Apgar score given various newborn situations.
	52.05 Discuss the common signs when ventilarory assistance is appropriate for a neonate.
	52.06 Discuss and demonstrate the steps in resuscitation of a neonate.
	52.07 Review the signs of hypovolemia in a newborn.
	52.08 Discuss the effects maternal narcotic usage has on the newborn.
	52.09 Discuss the management/treatment plan for vomiting in the neonate.
	52.10 Discuss the assessment findings associated with common birth injuries in the neonate.
53.0	**Pediatrics:** Demonstrate a fundamental depth, fundamental breath of knowledge of management of the pediatric patient within the scope of practice of the EMT. The student will be able to:
	53.01 Review the anatomy, physiology and pathophysiology differences of patients.
	53.02 Discuss the differences in approaching and assessing patients.
	53.03 Discuss and demonstrate assessment and management considerations for Sudden Unexplained Infant Death Syndrome (SUIDS).
	53.04 Describe the selection of appropriate airway adjuncts and ventilation devices.
	53.05 Discuss complications of improper utilization of airway adjuncts and ventilation devices.
	53.06 Describe the common causes, assessment and management of respiratory distress, failure, or arrest.

	53.07 Discuss the common causes, assessment and management of hypo-perfusion.
	53.08 Discuss the common causes, assessment and management of cardiopulmonary arrest.
	53.09 Describe the common causes, assessment and management of altered level of consciousness.
	53.10 Describe the common causes, assessment and management of trauma.
	53.11 Describe the common causes, assessment and management of neurological emergencies.
	53.12 Demonstrate proper technique for administering blow-by oxygen.
	53.13 Review proper technique for suctioning.
	53.14 Review appropriate use of airway adjuncts and ventilation devices.
	53.15 Review age-appropriate basic airway clearing maneuvers for a completely obstructed airway.
54.0	**Geriatrics:** Demonstrate a fundamental depth, foundational breadth of knowledge of management of the geriatric patient within the scope of practice of the EMT. The student will be able to:
	54.01 Define and discuss the term geriatrics.
	54.02 Review the anatomy, physiology and pathophysiology of the geriatric patient.
	54.03 Discuss common emotional and psychological concerns and conditions of the geriatric patient.
	54.04 Discuss the importance of fall prevention with the geriatric patient.
	54.05 Describe principles that should be employed when assessing and communicating with the geriatric patient.
	54.06 Describe the common causes, assessment, and management of the geriatric patient with a medical, trauma, or psychosocial complaint.
55.0	**Patients with Special Challenges:** Demonstrate a simple depth, simple breadth of knowledge of the management of the patient with special challenges patients of all ages. The student will be able to:
	55.01 Discuss the special considerations required when providing emergency care to patients with: • Abuse/neglect of vulnerable populations • Homelessness • Poverty • Bariatrics • Tech dependent • Hospice/terminally ill • Tracheostomy • Home care

	• Sensory deficit/loss • Developmental disability
55.02	Discuss special considerations regarding common medical devices used in the home care of patients with special challenges including: • Respiratory devices • Cardiac devices • Gastro-urinary devices • Central & peripheral IV catheters
55.03	Describe home care and the types of patients it serves and the services it encompasses.
55.04	Differentiate between hospice/palliative care and curative care.
55.05	Discuss the role of the EMT as a patient advocate for vulnerable populations.
56.0	**Principles of Safely Operating a Ground Ambulance:** Demonstrate a simple depth, foundational breadth of knowledge of risks and responsibilities of transport. The student will be able to:
56.01	Discuss the importance of performing regular vehicle and equipment inspection.
56.02	Demonstrate how to perform a daily inspection of an ambulance.
56.03	Review the general provisions of Florida laws relating to the operation of the ambulance.
56.04	Discuss the guidelines for operating an ambulance safety during emergency and non-emergency situation/incident.
56.05	Review considerations that are required for ensuring scene safety, including personal safety, patient safety, and traffic control.
56.06	Review how to clean and disinfect the ambulance and equipment.
57.0	**Incident Management:** Demonstrate a fundamental depth, fundamental breadth of knowledge of establishing and working within the incident management system. The student will be able to:
57.01	Discuss the importance of NIMS (National Incidence Management System) and its functional components.
57.02	Discuss unified command and when it is applicable.
57.03	Describe the role of command and the procedures for transfer of command.
57.04	List and describe the functions of the following groups and leaders in ICS as it pertains to EMS incidents: • Safety • Logistics • Rehabilitation • Staging, • Treatment

	• Triage • Transportation • Extrication/rescue • Morgue • Communications
	57.05 Discuss the physical and psychological signs of critical incident stress.
58.0	**Multiple Casualty Incidents:** Demonstrate a simple depth, foundational breadth of knowledge of responding to an emergency during a multiple casualty incident. The student will be able to:
	58.01 Review essential elements of scene size-up when arriving at a potential MCI.
	58.02 Describe the role of the rescuers and EMS systems in planning for MCIs and disasters.
	58.03 Describe the role of the physician at multiple casualty incidents.
	58.04 Define triage and describe the principles of triage.
	58.05 Describe the START (simple triage and rapid treatment) and JUMP START method of initial triage.
	58.06 Describe techniques used to allocate patients to hospitals and track them.
	58.07 Discuss and describe the essential equipment to provide logistical support to MCI operations.
	58.08 Describe the role of critical incident stress management during and after MCIs.
	58.09 Demonstrate the use of local/regional triage tagging system.
59.0	**Air Medical:** Demonstrate a simple depth, simple breadth of knowledge of safe air medical operations and criteria for utilizing air medical response. The student will be able to:
	59.01 Describe key scene safety considerations when preparing for a helicopter medivac, including establishing a landing zone and approaching the aircraft.
	59.02 Describe the capabilities, protocols, and methods for accessing air medical transport.
	59.03 Review the advantages and disadvantages of air medical transport.
	59.04 Review the conditions/situations in which air medical transport should be considered.
60.0	**Vehicle Extrication:** Demonstrate a simple depth, simple breadth of knowledge for safe vehicle extrication and use of simple hand tools. The student will be able to:
	60.01 Describe the role of the EMT in patient rescue and vehicle extrication
	60.02 Describe personal and patient safety during vehicle extrication.

	60.03 Explain the difference between simple access and complex access in vehicle extrication.
	60.04 Discuss patient care considerations related to assisting with rapid extrication, providing emergency care to the trapped patient and removing and transferring a patient.
	60.05 Discuss the use of simple hand tools used for vehicle extrication.
	60.06 Discuss and describe the hazards and safe practices associated with the following vehicle components: • Energy absorbing bumpers • Air bag/supplemental restraint systems • Catalytic converters and conventional fuel systems • Stored energy • Hybrid-electric vehicles
	60.07 Describe methods for emergency stabilization using rope, cribbing, jacks, spare tire, and come-a-longs for vehicles.
	60.08 Describe the electrical hazards commonly found at highway incidents (above and below ground).
	60.09 Explain the difference between tempered and safety glass, identify its locations on a vehicle and how to break it safely.
	60.10 Explain typical door anatomy and methods to gain access to the patient.
61.0	**Hazardous Materials Awareness:** Demonstrate a simple depth, simple breadth of knowledge of risks and responsibilities of operating in a cold zone at a hazardous material or other special incident. The student will be able to:
	61.01 Identify and describe resources for substance identification, decontamination, and treatment information, including but not limited to the following: • Poison control center • Medical control • Material safety data sheets (MSDS), • Reference textbooks • Computer databases • Computer-Aided Management of Emergency Operations (CAMEO) • CHEMTREC • Technical specialists • Agency for toxic substances and disease registry
	61.02 Explain primary and secondary contamination risk.
	61.03 Review routes of exposure.
	61.04 Discuss how the substance and route of contamination alters triage and decontamination methods.
	61.05 Explain the common signs, symptoms, and treatment for the following substances: • Corrosives

	• Pesticides • Chemical asphyxiants • Hydrocarbon solvents
61.06	Identify local facilities and resources capable of treating patients exposed to hazardous materials.
61.07	Determine the appropriate level of PPE by considering the following: • Types • Application • Use and limitations • Use of chemical compatibility chart
61.08	Explain specific decontamination procedures.
61.09	Discuss the designated HAZMAT control zones (HOT, WARM, and COLD).
61.10	Discuss an emergency two-step decontamination process.
61.11	Identify DOT Labels, placards and markings that are used to designate HAZMAT materials.
61.12	Demonstrate the ability to use a variety of reference materials to identify a HAZMAT material.
62.0	**Mass Casualty Incidents Due to Terrorism and Disaster:** Demonstrate a simple depth, simple breadth of knowledge of risks and responsibilities of operating on the scene of a natural or man-made disaster. The student will be able to:
62.01	Describe the role of the EMT on the scene of a natural or man-made disaster.
62.02	Define the different types of terrorism and provide examples of incidents of each.
62.03	Describe the factors related to ensuring situational safety at the site of a disaster and the procedures required.
62.04	Discuss the National Terrorism Advisory System.
62.05	Discuss factors to consider when responding to a terrorist situation.
62.06	Review important actions to take at the scene of a terrorist event such as: • Scene safety • Personal protection • Notification procedures • Available resources • Working with in the command system
62.07	List and describe the main categories of weapons of mass destruction.
62.08	Discuss the different types of chemical agents and their signs and symptoms.

62.09	Review the treatment and management of patients exposed to various types of chemical agents and radiation.
62.10	Review the different types of radiations and their effect on the human body.
62.11	Discuss the use of a nerve agent antidote kit.

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as, experimental, quality, and safety procedures are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate and troubleshoot equipment/tools used to make observations. Students understand measurement error; and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

Special Notes

The standard length of this program is 300 clock hours or 12 credit hours.

Career and Technical Student Organization (CTSO)

CTSOs are co-curricular career and technical student organizations providing leadership training and reinforcing specific career and technical skills. Career and Technical Student Organizations provide activities for students as an integral part of the instruction offered. Other CTSOs not listed in this curriculum framework or recognized by the Florida Department of Education are permissible provided they support student mastery over the standards and benchmarks of this curriculum framework.

Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

Florida Department of Education
Curriculum Framework

Program Title: **Paramedic**
Program Type: **ATD (Applied Technology Diploma)**
Career Cluster: **Health Science**

	College Credit	Clock Hour
Program Number	N/A	H170212
CIP Number	0351090417	0351090418
Grade Level	College Credit	30, 31
Program Length	42 credit hours	1100 clock hours
CTSO	HOSA	HOSA
SOC Codes (all applicable)	Please see the Master Credential List for this program's assigned SOC codes. https://careersourceflorida.com/boardroom/florida-credentials-review-committee-draft/master-credentials-list/	
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml	
Basic Skills Level:	N/A	Computation (Mathematics): 10 Communications (Reading and Language Arts): 10

Purpose

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Health Science career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of the Health Science career cluster.

This is an instructional program that prepares students for employment as paramedics (Emergency Medical Technicians & Paramedics) to function at the basic pre-hospital emergency medical technician - paramedic level and treat various medical/trauma conditions, using appropriate equipment and materials. The program prepares students for certification as paramedics in accordance with Chapter 64E-2 of the Florida Administrative Code.

The content includes but is not limited to: patient assessment, advanced airway management, cardiovascular emergencies, external and internal bleeding and shock, traumatic injuries, fractures, dislocations, sprains, poisoning, heart attack, stroke, diabetes, pharmacology, medication administration, respiratory emergencies, endocrine emergencies, acute abdomen, communicable diseases, patients with abnormal behavior, substance abuse, the unconscious state, emergency childbirth, pediatric and geriatric emergencies, burns, environmental hazards, communications, documentation, extrication, mass casualty incident, incident command system, and transportation of patient.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Program Structure

This program is an Applied Technology Diploma (ATD) program that is part of a technical degree program, is less than 60 credit hours, and leads to employment in a specific occupation. An ATD program may consist of either technical credit or college credit. A public school district may offer an ATD program only as clock hour, with college credit awarded to a student upon articulation to a state college.

When developing the course sequence for the local implementation of this program, select courses that:

- Meet the skill development requirements of the standards and benchmarks of this program.
- Where reasonable and practicable, align with programs offered by your institution or other postsecondary institutions in Florida, including:
  - Related AS and AAS degrees.
  - Baccalaureate degrees within the same career pathway and/or Federal CIP code.

Visit FloridaShines' Discover Programs website to identify other institutions that offer similar programs to review their course sequencing. Where appropriate, course alignment between institutions offering related programs can facilitate interagency student articulation.

Visit FloridaShines' Common Prerequisites Manual to identify courses that are prerequisites for admission into an upper division program. When sub-baccalaureate courses are aligned to the course admissions requirements of baccalaureate programs with the same career pathway, students can enter upper division coursework seamlessly.

Clock Hour Program

When offered at the district level, this program is a planned sequence of instruction consisting of 1 occupational completion point and the courses as shown below.

OCP	Course Number	Course Title	Length
A	EMS0210	Paramedic I	248 hours
	EMS0211	Paramedic II	426 hours
	EMS0212	Paramedic III	426 hours

College Credit Program

When offered at the college credit level, this ATD program is part of the Emergency Medical Services AS program (1351090402) and has a program length of 42 credits.

Regulated Programs

The Paramedic standards and benchmarks in this framework include all of the content, knowledge and skills at the EMT level in addition to the Paramedic objectives. For those standards that state "Review EMT standards and benchmarks", please refer to the EMT curriculum framework for specific objectives.

This program meets the Department of Health trauma score card methodologies and Sudden Unexpected Infant Death Syndrome (SUIDS) training education requirements. Upon completion of this program, the instructor will provide a certificate to the student verifying that these requirements have been met. This program also meets the Department of Health's education requirements for HIV/AIDS, Domestic Violence and Prevention of Medical Errors. Although not a requirement for initial licensure, it is a requirement for renewal, therefore the instructor may provide a certificate for renewal purposes to the student verifying these requirements have been met.

A Paramedic program must be taught by faculty meeting the qualifications as set forth in 64J-1.020, F.A.C.

Florida Statute (F.S.) 401.2701 requires that the instructor-student ratio should not exceed 1:6.

Field internship shall include a competency-based program to assure appropriate pre-hospital assessment and management of medical and trauma patients, as well as associated manual skills. The field internship activity shall include supervised experience in the field setting with a certified ALS transport EMS agency or ALS fire department. Refer to 64J-1.20, F.A.C., for additional requirements of the field internship inside of the paramedic program.

Pursuant 401.2701, F.S. to Paramedic programs must be available only to Florida-certified emergency medical technicians or an emergency medical technician applicant who will obtain Florida certification prior to completion of phase one of the paramedic program and EMT certification must be maintained through the program.

It is strongly recommended this program be accredited by Commission on Accreditation of Allied Health Education Programs (CAAHEP). **NREMT requires that all paramedic students graduate from a CAAHEP-accredited Paramedic program (or an education program that has been issued a CoAEMSP "Letter of Review") that meets or exceeds the National Emergency Medical Services Education Standards for Paramedic.**

The Student Performance Standards for Paramedic were adapted and condensed from the most current US Department of Transportation, National EMS Educational Standards for the Paramedic. Administrators and instructors should refer to these materials for additional detail.

"It is highly recommended, though not mandatory, that courses in medical terminology, anatomy, and pharmacology be completed before enrolling in EMT and Paramedic training."

"All EMT/Paramedic students are required to complete the 4-hour Traffic Incident Management Safety (TIMS) course at least once. This requirement can be fulfilled either as a prerequisite or as part of the curriculum, at the discretion of the EMS education program."

Florida's Career Readiness Skills for CTE Programs

Employability Skills	
01.0	Apply academic skills to workplace scenarios.
01.01	Use reading skills.
01.02	Use writing skills.
01.03	Use mathematical strategies and procedures.
01.04	Use scientific principles and procedures.
02.0	Design a solution to an industry problem.
02.01	Use critical thinking.
02.02	Use creativity.
02.03	Make sound decisions.
02.04	Solve problems.
02.05	Reason.
02.06	Plan and organize.
03.0	Manage resources within an industry project
03.01	Manage time.
03.02	Manage money or resources.
03.03	Manage materials.
03.04	Manage personnel.
04.0	Oversee the subcomponents, operations and output of a technical or organizational system.
04.01	Manage systems.
04.02	Monitor systems.
04.03	Improve systems.
05.0	Use information for decision making.
05.01	Locate information.
05.02	Organize information.
05.03	Use information.

	05.04 Analyze information.
	05.05 Communicate information.
06.0	Apply relevant technology to workplace scenarios to aid productivity.
	06.01 Use technology.
07.0	Interpret and express interpersonal communication.
	07.01 Communicate verbally.
	07.02 Listen actively.
	07.03 Comprehend written material.
	07.04 Convey information in writing.
	07.05 Communicate nonverbally.
	07.06 Interpret nonverbal communication.
08.0	Interact with others to accomplish workplace goals.
	08.01 Collaborate with others in a team.
	08.02 Respond to customer needs.
	08.03 Exercise leadership.
	08.04 Negotiate to resolve conflict.
	08.05 Respect others.
09.0	Manage personal behavior to maximize productivity and professional growth.
	09.01 Demonstrate responsibility and self-discipline.
	09.02 Adapt and show flexibility.
	09.03 Work independently.
	09.04 Demonstrate a willingness to learn.
	09.05 Demonstrate integrity.
	09.06 Demonstrate professionalism.
	09.07 Take initiative.
	09.08 Display positive attitude.
	09.09 Take responsibility for professional growth.

Job Attainment	
10.0	Find, assess and apply to job opportunities.
10.01	Identify online job posts relevant to his or her career aspirations.
10.02	Compare and contrast the job posts' required qualifications, job duties, compensation, benefits and employers.
10.03	Define what information, documentation and writing prompts are required for the positions.
11.0	Communicate personal competence, character and fit for a job opportunity.
11.01	Develop a resume.
11.02	Write a cover letter.
11.03	Curate a professional portfolio that includes work products.
11.04	Prepare for and experience a mock job interview.
12.0	Cultivate and leverage relationships to professionally advance.
12.01	Request a signed reference letter, letter of recommendation and/or an online skill/professionalism endorsement.
12.02	Develop a plan to cultivate a professional digital footprint.
12.03	Develop a networking plan for a specific industry of interest.

Standards

After successfully completing this program, the student will be able to perform the following:

01.0 Demonstrate a fundamental depth, foundational breadth of knowledge of the History of EMS and a complex depth, comprehensive breadth of knowledge of EMS Systems.
02.0 Demonstrate a fundamental depth, foundational breath of knowledge of research principles to interpret literature and advocate evidence-based practice.
03.0 Demonstrate a complex depth, comprehensive breadth of knowledge of workforce safety and wellness.
04.0 Demonstrate a complex depth, comprehensive breadth of knowledge of the principles of medical documentation and report writing.
05.0 Demonstrate a complex depth, comprehensive breadth of knowledge of EMS communication system.
06.0 Demonstrate a complex depth, comprehensive breadth of knowledge of the therapeutic communication principles.
07.0 Demonstrate a complex depth, comprehensive breadth of knowledge of medical legal and ethical concepts related to EMS.
08.0 Integrate a comprehensive knowledge of anatomy and physiology of all human systems.
09.0 Integrate a comprehensive knowledge in the use of medical terminology and abbreviations into written and oral communication with health care professionals.
10.0 Demonstrate a complex knowledge of pathophysiology of major systems.
11.0 Integrate the knowledge of the physiological, psychological, and sociological changes throughout human development.
12.0 Demonstrate a fundamental knowledge of the principles of public health.
13.0 Demonstrate a complex depth, comprehensive breadth of knowledge in the principles of pharmacology.
14.0 Demonstrate a complex depth, comprehensive breadth of knowledge of medication administration within the scope of practice of the paramedic.
15.0 Demonstrate a complex depth, comprehensive breadth of knowledge of emergency medications within the scope of practice for the paramedic.
16.0 Demonstrate a complex depth, comprehensive breadth of knowledge of airway management within the scope of practice of the paramedic, patients of all ages.
17.0 Demonstrate a complex depth, comprehensive breadth of knowledge of respiration within the scope of practice of the paramedic, patients of all ages.
18.0 Demonstrate a complex breadth, comprehensive breadth of knowledge of ventilator assessment and management, patients of all ages.
19.0 Demonstrate a complex depth, comprehensive breadth of knowledge of scene management.
20.0 Demonstrate a complex depth, comprehensive breadth of knowledge of the primary assessment for all patient situations.
21.0 Demonstrate a complex depth, comprehensive breath of knowledge of the components of history taking.
22.0 Demonstrate a complex depth, comprehensive breadth of knowledge of techniques used for a secondary assessment, patients of all ages
23.0 Demonstrate a fundamental depth, foundational breadth of knowledge of monitoring devices within the scope of practice of the paramedic.
24.0 Demonstrate a complex depth, comprehensive breadth of knowledge of how and when to perform a reassessment for all patient situations.
25.0 Demonstrate a complex depth, comprehensive breadth of knowledge of pathophysiology, assessment, and management of medical complaints.
26.0 Demonstrate a complex depth, comprehensive breadth of knowledge of neurologic disorders/emergencies, patients of all ages.
27.0 Demonstrate a complex depth, comprehensive breadth of knowledge of abdominal and gastrointestinal disorders/emergencies, patients of all ages.
28.0 Demonstrate a complex depth, comprehensive breadth of knowledge of immunology disorders/emergencies, patients of all ages.

29.0 Demonstrate a complex depth, comprehensive breadth of knowledge of assessment and management of a patient who may have an infectious disease, patient of all ages.
30.0 Demonstrate a complex depth, comprehensive breadth of knowledge in endocrine disorders/emergencies, patients of all ages.
31.0 Demonstrate a complex depth, comprehensive breadth of knowledge regarding the assessment and management of psychiatric disorders, cognitive and behavioral emergencies.
32.0 Demonstrate a complex depth, comprehensive breadth of knowledge of cardiovascular disorders/ emergencies, patients of all ages.
33.0 Demonstrate a complex depth, comprehensive breadth of knowledge of the assessment and management of toxicology emergencies including psychosocial aspects of age-related assessment and treatment modifications for the major or common diseases and patients of all ages.
34.0 Demonstrate a complex depth, comprehensive breadth of knowledge of the assessment and management of respiratory disorders, include psychosocial aspects of age-related assessment and treatment modifications for the major or common diseases and/ or emergencies associated emergencies, patients of all ages.
35.0 Demonstrate a complex depth, foundational breadth of knowledge of the assessment and management of hematology disorders/ emergencies, patients of all ages.
36.0 Demonstrate a complex depth, comprehensive breadth of knowledge of genitourinary and renal emergencies to include psychosocial aspects of age-related assessment and treatment modifications for the major or common diseases and/or emergencies, patients of all ages.
37.0 Demonstrate a complex depth, comprehensive breadth of knowledge of the assessment findings and the management of gynecology disorders Include psychosocial aspects of age-related assessment and treatment modifications for the major or common diseases and/or /emergencies, patients of all ages.
38.0 Demonstrate a fundamental depth, foundation breadth of knowledge of the assessment and management of non-traumatic fractures, patients of all ages.
39.0 Demonstrate a fundamental depth, foundational breadth of knowledge of the assessment and management of common or major diseases of the eyes, ears, nose, and throat, patients of all ages.
40.0 Demonstrate the integration of comprehensive knowledge of cause and pathophysiology into management of shock (include psychosocial aspect of age-related assessment and treatment modifications for pediatric and geriatric patients).
41.0 Demonstrate the integration of a comprehensive knowledge of causes and pathophysiology into the management of cardiac arrest and respiratory failure (including psychosocial aspects of age-related assessment and treatment modifications for pediatric and geriatric patients).
42.0 Demonstrate a complex depth, comprehension breadth of knowledge of pathophysiology, assessment and management of bleeding, patients of all ages.
43.0 Demonstrate a complex depth, comprehensive breadth of knowledge of multi-system trauma and blast injuries.
44.0 Demonstrate a complex depth, comprehensive breadth of knowledge of pathophysiology, assessment, and management of chest trauma, patients of all ages.
45.0 Demonstrate a complex depth, comprehensive breadth of knowledge of pathophysiology, assessment, and management of abdominal and genitourinary trauma, patients of all ages.
46.0 Demonstrate a fundamental depth, foundational breadth of knowledge of pathophysiology, assessment, and management of orthopedic trauma, patients of all ages.
47.0 Demonstrate a complex depth, comprehensive breadth of knowledge of pathophysiology, assessment, and management of soft tissue trauma. patients of all ages. (Include psychosocial aspects of age- related assessment and treatment modifications for pediatric and geriatric patients).

48.0 Demonstrate a fundamental depth, foundational breadth of knowledge of head, face, neck, and spine trauma, patients of all ages.
49.0 Demonstrate a fundamental depth, foundational breadth of knowledge of nervous system trauma, patients of all ages.
50.0 Demonstrate a complex depth, comprehensive breadth of knowledge of special considerations in trauma, patients of all ages.
51.0 Demonstrate a complex depth, comprehensive breadth of knowledge of environmental emergencies, patients of all ages.
52.0 Demonstrate a complex depth, comprehensive breadth of knowledge of the management of the obstetric patient within the scope of practice of the paramedic.
53.0 Demonstrate a complex depth, comprehensive breadth of knowledge of the management of the neonatal patient within the scope of practice of the paramedic.
54.0 Demonstrate a complex depth, comprehensive breadth of knowledge of the management of the pediatric patient within the scope of practice of the paramedic.
55.0 Demonstrate a complex depth, comprehensive breadth of knowledge of the management of the geriatric patient within the scope of practice of the paramedic.
56.0 Demonstrate a complex depth, comprehensive breadth of knowledge of management of the patient with special challenges within the scope of practice of the paramedic, patients of all ages.
57.0 Demonstrate a simple depth, foundational breadth of knowledge of risks and responsibilities of transport.
58.0 Demonstrate a complex depth, comprehensive breadth of knowledge of establishing and working within the incident management system.
59.0 Demonstrate a simple depth, foundational breadth of knowledge of responding to an emergency during a multiple casualty incident.
60.0 Demonstrate a complex depth, comprehensive breadth of knowledge of air medical transport risks, needs, and advantages.
61.0 Demonstrate a simple depth, simple breadth of knowledge for safe vehicle extrication and use of simple hand tools.
62.0 Demonstrate a simple depth, simple breadth of knowledge of risks and responsibilities of operating in a cold zone at a hazardous material or other special incident.
63.0 Demonstrate a simple depth, simple breadth of knowledge of risks and responsibilities of operating on the scene of a natural or man-made disaster.

Florida Department of Education
Student Performance Standards

Program Title: Paramedic - ATD
Clock Hour Program Number: H170212

When this program is offered at the district level, the following organization of courses, standards, and benchmarks apply.

The Paramedic standards and benchmarks in this framework include all of the content, knowledge and skills at the EMT level in addition to the Paramedic objectives. For those standards that state "Review EMT standards and benchmarks", please refer to the EMT curriculum framework for specific objectives.

Course Number: EMS0210 **Occupational Completion Point: A** **Paramedic I – 248 hours**	
01.0	**EMS Systems:** Demonstrate a fundamental depth, foundational breadth of knowledge of the History of EMS and a complex depth, comprehensive breadth of knowledge of EMS Systems. The student will be able to:
01.01	Define terms, including but not limited to: EMS systems, licensure, registration, profession, professionalism, health care professional, ethics, peer review, medical direction, and protocols.
01.02	Knowledge of EMS History.
01.03	Describe the attributes of a paramedic as a health care professional.
01.04	Explain paramedic licensure/ certification, recertification, and reciprocity requirements in Florida.
01.05	Explain the importance of maintaining one's paramedic license/certification.
01.06	Describe the benefits of paramedic continuing education.
01.07	Discuss the role of national associations and of a national certification agency.
01.08	Discuss Chapter 401, Florida Statutes (F.S.), and Chapter 64-E, Florida Administrative Code (F.A.C.).
01.09	Discuss the roles of various EMS standard setting agencies.
01.10	Identify the standards (components) of an EMS System as defined by the National Highway Traffic Safety Administration.
01.11	Describe and demonstrate professional behaviors in the following areas: integrity, empathy, self-motivation, appearance and personal hygiene, self-confidence, communications, time management, teamwork and diplomacy, respect, patient advocacy, and careful delivery of service.
01.12	Describe the role of the EMS physician in providing medical direction.

	01.13 Discuss examples of local protocols.
	01.14 Differentiate between quality improvement and quality assurance.
	01.15 Describe the relationship between a physician on the scene, the paramedic on the scene, and the EMS physician providing on-line medical direction.
	01.16 Describe the role of the paramedic relative to the safety of the crew, the patient, and bystanders.
	01.17 Assess personal practices relative to the responsibility for personal safety, the safety of the crew, the patient, and bystanders.
	01.18 Advocate the need for injury prevention.
	01.19 Discuss the diverse types of EMS services and differences in their provision of care. Including mobile integrated health and community paramedic and discuss the paramedics role in community risk reduction.
02.0	**Research:** Demonstrate a fundamental depth, foundational breath of knowledge of research principles to interpret literature and advocate evidence-based practice. The student will be able to:
	02.01 Interpret results and reach conclusions.
	02.02 Discuss the importance of evidenced based medicine and medical research and its role in refining EMS practices.
03.0	**Workforce Safety and Wellness:** Demonstrate a complex depth, comprehensive breadth of knowledge of workforce safety and wellness. The student will be able to:
	03.01 Discuss the concept of wellness and its benefits.
	03.02 Discuss how cardiovascular endurance, muscle strength, and flexibility contribute to physical fitness.
	03.03 Describe the impact of shift work on circadian rhythms.
	03.04 Discuss the role of risk assessments and warning signs in cancer and cardiovascular disease.
	03.05 Differentiate between proper from improper body mechanics for lifting and moving patients in emergency and non-emergency situations.
	03.06 Discuss the principles of crew resource management.
	03.07 Describe the problems that a paramedic might encounter in a hostile situation and the techniques used to manage the situation.
	03.08 Describe the equipment available for self-protection when confronted with a variety of adverse situations.
	03.09 Describe the three phases and factors that trigger the stress response.
	03.10 Differentiate between normal/ healthy and detrimental reactions to anxiety and stress.
	03.11 Identify and describe the defense mechanisms and management techniques and resources commonly used to deal with stress.

	03.12 Describe the components of critical incident stress management (CISM).
	03.13 Describe the needs of the paramedic when dealing with death and dying.
	03.14 Discuss the importance of standard precautions and body substance isolation practices.
	03.15 Discuss the principles of disease transmission and prevention measures
	03.16 Discuss the need to treat each patient as an individual, with respect and dignity.
	03.17 Discuss the need to respect the emotional needs of dying patients and their families.
	03.18 Discuss the paramedics' role in performing community risk assessment.
04.0	**Documentation:** Demonstrate a complex depth, comprehensive breadth of knowledge of the principles of medical documentation and report writing. The student will be able to:
	04.01 Identify the general principles regarding the importance of EMS documentation and ways in which documents are used.
	04.02 Demonstrate proper use of medical terminology.
	04.03 Record pertinent administrative information to a given standard.
	04.04 Analyze the documentation for accuracy and completeness, including spelling.
	04.05 Describe the differences between subjective and objective elements of documentation.
	04.06 Describe the potential consequences of illegible, incomplete, or inaccurate documentation.
	04.07 Describe the special considerations concerning patient refusal of transport.
	04.08 Explain how to properly record direct patient or bystander comments.
	04.09 Describe the special considerations concerning mass casualty incident documentation.
	04.10 Identify and record the pertinent, reportable clinical data of each patient interaction.
	04.11 Note and record pertinent negative clinical findings.
	04.12 Demonstrate proper completion of an EMS PCR (patient care record).
05.0	**EMS Communication:** Demonstrate a complex depth, comprehensive breadth of knowledge of EMS communication system. The student will be able to:
	05.01 Identify the role of verbal, written, and electronic communications in the provision of EMS.

	05.02 Describe the phases of communications necessary for an emergency response and transport.
	05.03 Discuss the importance of proper terminology when communicating during an emergency.
	05.04 Discuss factors that impede or enhance effective verbal and written communications.
	05.05 Discuss the legal implications of written communications.
	05.06 Identify the components of the local EMS communications system and describe their function and use.
	05.07 Identify and differentiate among the following communications systems: simplex, multiplex, duplex, trunked, digital communications, and cellular telephone.
	05.08 Describe the functions and responsibilities of the Federal Communications Commission.
	05.09 Describe how emergency medical dispatch (EMD) functions as an integral part of the EMS system.
	05.10 List appropriate information to be gathered by the telecommunicator.
	05.11 Demonstrate an organized and concise radio transmission
	05.12 Demonstrate an organized and concise patient report upon transfer of care.
06.0	**Therapeutic Communication:** Demonstrate a complex depth, comprehensive breadth of knowledge of the therapeutic communication principles. The student will be able to:
	06.01 Demonstrate health care literacy when communicating with patients.
	06.02 Identify internal and external factors that affect a patient/ bystander interview conducted by a paramedic.
	06.03 Review the strategies for developing patient rapport.
	06.04 Summarize the methods to assess mental status based on interview techniques.
	06.05 Discuss the strategies for interviewing difficult patients.
	06.06 Summarize developmental considerations, patients of all ages that influence patient interviewing.
	06.07 Review unique interviewing techniques necessary to employ with patients who have special needs.
	06.08 Discuss interviewing considerations used by paramedics in cross-cultural communications.
07.0	**Medical/Legal and Ethics:** Demonstrate a complex depth, comprehensive breadth of knowledge of medical legal and ethical concepts related to EMS. The student will be able to:
	07.01 Differentiate between legal and ethical responsibilities.

	07.02 Discuss State of Florida and Federal special reporting situations including: • Abuse • Sexual assault • Gunshot and knife wounds • Communicable disease • Animal bites
	07.03 Review terms, including but not limited to, the following: abandonment, battery, breach of duty, consent (expressed, implied, informed, voluntary), DNR orders, duty to act, emancipated minor, false imprisonment, liability, libel, negligence, proximate cause, scope of practice, slander, and tort.
	07.04 Differentiate between the scope of practice and the standard of care for paramedic practice.
	07.05 Discuss the concept of medical direction, including off-line medical direction and on-line medical direction, and its relationship to the standard of care of a paramedic.
	07.06 Review the four elements that must be present in order to prove negligence.
	07.07 Review the legal concept and limitations of immunity, including Good Samaritan statutes and governmental immunity, as it applies to the paramedic.
	07.08 Review the importance and necessity of patient confidentiality and the standards for maintaining patient confidentiality that apply to the paramedic.
	07.09 Review consent to include expressed, informed, implied, and involuntary.
	07.10 Discuss the importance of patient rights and advocating for the patient's best interest.
	07.11 Demonstrate appropriate patient management techniques in a refusal of care situation.
	07.12 Discuss the issues of abandonment, negligence, false imprisonment, and battery and their implications to the paramedic.
	07.13 Describe the actions that the paramedic should take to preserve evidence at a crime or accident scene.
	07.14 Describe the importance of providing accurate communication (oral and written) in substantiating an incident.
	07.15 Describe the criteria necessary to honor an advance directive in Florida.
08.0	**Anatomy and Physiology:** Integrate comprehensive knowledge of anatomy and physiology of all human systems. The student will be able to:
	08.01 Review the EMT standards and benchmarks for the anatomy & physiology.
	08.02 Demonstrate comprehensive knowledge of anatomy and physiology as it applies to paramedic practice.
09.0	**Medical Terminology:** Integrate a comprehensive knowledge in the use of medical terminology and abbreviations into written and oral communication with health care professionals. The student will be able to:
	09.01 Review the EMT standards and benchmarks for medical terminology.

	09.02 Demonstrate a comprehensive knowledge of medical terminology as it applies to paramedic practice.
10.0	**Pathophysiology:** Demonstrate a complex knowledge of pathophysiology of major systems. The student will be able to:
	10.01 Describe the factors that precipitate disease in the human body including genetics familial, diseases and risk factors.
	10.02 Describe environmental risk factors.
	10.03 Define and discuss the pathogenesis, signs, and symptoms of distributive, obstructive, neurogenic, anaphylactic, and septic shock.
	10.04 Discuss multiple organ dysfunction syndrome (MODS).
	10.05 Describe alterations in cells and tissues including cellular adaptation, cellular injury, manifestation of cellular injury, and cellular death/necrosis.
	10.06 Describe genetics and familial diseases and the role they play in pathophysiology.
	10.07 Describe the self–defense mechanisms of inflammation and immune responses and their relationships to pathophysiology.
11.0	**Life Span Development:** Integrate the knowledge of the physiological, psychological, and sociological changes throughout human development. The student will be able to:
	11.01 Compare, contrast, and analyze the physiological and psychosocial characteristics of patients of all ages .
12.0	**Public Health:** Demonstrate a fundamental knowledge of principles of public health. The student will be able to:
	12.01 Review the EMT standards and benchmarks for the public health.
	12.02 Apply a fundamental knowledge of the principles of public health, epidemiology, health promotion, and illness and injury prevention.
	12.03 Discuss human trafficking and the need to recognize potential victims.
	12.04 Review Electronic Health Records in EMS.
	12.05 Discuss the roles of governmental and nongovernmental agencies in public health.
	12.06 Review the mission and goals of public health.
	12.07 Discuss the social, geographic, economic, and demographic factors that influence public health.
	12.08 Demonstrate the ability to provide patient and community education on public health topics.
	12.09 Discuss unique concerns in the pediatric, geriatric, and special populations.
	12.10 Describe the role of EMS in health screenings, vaccinations, and immunizations.

	12.11 Discuss the impacts of the political, social, and economic environments on public health.
	12.12 Review the various types of infectious disease that are a threat to public health.
	12.13 Describe the various patient dispositions, choosing appropriate destinations, and transport modes.
	12.14 Define and understand bioinformatics and its role in EMS and public health.
	12.15 Analyze the principles and practices of Mobile Integrated Health in enhancing community healthcare delivery.
	12.16 Evaluate technology integration and data sharing in Mobile Integrated Health initiatives.
	12.17 Review the collaboration between EMS and other healthcare providers within Mobile Integrated Health frameworks.
	12.18 Demonstrate strategies for addressing the social determinants of health through Mobile Integrated Health Services.
	12.19 Evaluate the integration of community resources and services in the primary assessment process within Mobile Integrated Health.
	12.20 Review and understand substance abuse disorders and how they impact public health
13.0	**Principles of Pharmacology:** Demonstrate a complex depth, comprehensive breadth of knowledge in the principles of pharmacology. The student will be able to:
	13.01 Discuss medication administration safety.
	13.02 Differentiate among the chemical, generic (nonproprietary), and trade (proprietary) names of a drug.
	13.03 List the four main sources of drug products.
	13.04 Describe how drugs are classified.
	13.05 List legislative acts controlling drug use and abuse in the United States.
	13.06 Differentiate among Schedule I, II, III, IV, and V substances.
	13.07 Use reference materials to research medications.
	13.08 Discuss standardization of drugs.
	13.09 Discuss investigational drugs, including the Food and Drug Administration (FDA) approval process and the FDA classifications for newly approved drugs.
	13.10 Discuss the paramedic's responsibilities and scope of practice pertinent to the administration of medications.
	13.11 Review best practices and legal requirements for the storage and security of medications.

	13.12 List and describe available drug forms.
	13.13 List and differentiate all methods and routes of medication administration covered in the current National EMS Scope of Practice Model.
	13.14 Describe the process of: • Pharmacokinetics • Pharmacodynamics • Theories of drug action • Drug-response relationship • Factors altering drug responses • Predictable drug responses • Iatrogenic drug responses • Unpredictable adverse drug responses
	13.15 Discuss the prevention, recognition and management of adverse medication reactions.
	13.16 Discuss the prevention, recognition and management of medication interactions.
	13.17 Select the optimal medication and method of medication administration for patients with a particular clinical condition or situation.
14.0	**Medication Administration:** Demonstrate a complex depth, comprehensive breadth of knowledge of medication administration within the scope of practice of the paramedic. The student will be able to:
	14.01 Review the specific anatomy and physiology pertinent to medication administration.
	14.02 Discuss the paramedic's responsibilities and scope of practice pertinent to the administration of medications.
	14.03 Review mathematical principles and demonstrate equations necessary for performing drug calculations. ***include resources for safe administration of weight-based dosing.***
	14.04 Describe the indications, contraindications, procedure, equipment and risks associated with peripheral intravenous or external jugular access.
	14.05 Describe the indications, equipment needed, technique used, precautions, and general principles of intraosseous needle placement and infusion.
	14.06 Describe complications that can occur as a result of IV therapy.
	14.07 Review ***medication cross-check procedure and*** the "six rights" of drug administration and correlate these with the principles of medication administration.
	14.08 Describe the use of standard precautions and body substance isolation (BSI) procedures when administering a medication.
	14.09 Prepare medications for administration from a variety of types of packaging, including vials, non-constituted vials, ampules, prefilled syringes, and packaging for intravenous solutions.
	14.10 Describe the role of medical direction in medication administration and describe the difference between direct orders (online) and standing orders (off-line).

14.11	Describe the indications, equipment needed, techniques used, precautions, and general principles of administering medications by the following routes: • Inhalation route • Gastric tube • Rectal route
14.12	Differentiate among the different percutaneous routes of medication administration.
14.13	Describe the purpose, equipment needed, techniques used, complications, and general principles for obtaining a blood sample.
14.14	Obtain venous and capillary blood for testing and discuss blood chemistry and normal values.
14.15	Demonstrate principles of medical asepsis in the administration of medications.
14.16	Demonstrate the procedure for disposal of contaminated items and supplies.
14.17	Demonstrate cannulation of peripheral, intravenous and/or external jugular veins.
14.18	Demonstrate intraosseous access.
14.19	Demonstrate administration of medications by the following routes: • Oral • Sublingual • Buccal • Auto-injector • Inhalation route • Intranasal route • Subcutaneous route • Intramuscular route • Intravenous route • Intraosseous route
15.0	**Emergency Medications:** Demonstrate a complex depth, comprehensive breadth of knowledge of emergency medications within the scope of practice for the paramedic. The student will be able to:
15.01	Discuss medications ***acute and maintenance/chronic***) used by the paramedic, including indications, ***name, effects, medication action, routes of administration***, contraindications, dosages, adverse reactions, side effects, ***complications*** and interactions for the following: • Airway management • Respiratory • Cardiovascular • Neurologic conditions • Gastrointestinal • Miscellaneous medications

	• Pain management
	15.02 Discuss polypharmacy.
16.0	**Airway Management:** Demonstrate a complex depth, comprehensive breadth of knowledge of airway management within the scope of practice of the paramedic, patients of all ages. The student will be able to:
	16.01 Explain the primary objective of airway maintenance. ***to include proper airway assessment and techniques of assuring a patient airway.***
	16.02 Explain the differences in airway anatomy.
	16.03 Define, identify and describe a tracheostomy, laryngectomy, stoma, and tracheostomy tube.
	16.04 Describe the special considerations in airway management and ventilation for the pediatric patient.
	16.05 Describe the indications, contraindications, advantages, disadvantages, complications and equipment for rapid sequence intubation with neuromuscular blockade.
	16.06 Identify neuromuscular blocking drugs and other agents used in rapid sequence intubation.
	16.07 Describe the indications, contraindications, advantages, disadvantages, complications and equipment for sedation during intubation.
	16.08 Describe the indications, contraindications, advantages, disadvantages and complications for performing cricothyrotomy.
	16.09 Demonstrate the procedure for percutaneous cricothyrotomy.
	16.10 Review the function of the structures located in the upper and lower airway.
	16.11 Demonstrate effective techniques of advanced airway management of the following: • Orotracheal, • Nasotracheal, • Subglottic, • Supraglottic, • Digital intubation
	16.12 Describe and demonstrate methods of assessment for confirming correct placement of any airway device.
	16.13 Describe the indications, contraindications, advantages, disadvantages, complications, equipment and technique for extubation.

17.0	**Respiration:** Demonstrate a complex depth, comprehensive breadth of knowledge of respiration within the scope of practice of the paramedic, patients of all ages. The student will be able to:
	17.01 List the concentration of gases that comprise atmospheric air.
	17.02 Describe the measurement of oxygen in the blood.
	17.03 Describe the measurement of carbon dioxide in the blood.
	17.04 Describe peak expiratory flow.
	17.05 Describe factors that cause decreased oxygen concentrations in the blood.
	17.06 Describe the factors that increase and decrease carbon dioxide production in the body.
	17.07 Define pulsus paradoxus.
	17.08 Describe the indications, contraindications, advantages, disadvantages, complications, liter flow range, and concentration of delivered oxygen for supplemental oxygen delivery devices.
	17.09 Review the ***anatomy***, physiology and ***pathophysiology*** of ventilation and respiration to include • Pulmonary ventilation • Oxygenation • Respiration • External • Internal • Cellular
	17.10 Discuss assessment and management of adequate and inadequate respiration to include, supplemental oxygen therapy.
18.0	**Ventilation:** Demonstrate a complex breadth, comprehensive breadth of knowledge of ventilatory assessment and management, patients of all ages. The student will be able to:
	18.01 Perform and interpret pulse oximetry and capnography.
	18.02 Describe indications, contraindications, advantages, disadvantages, complications, and technique for ventilating a patient with an automatic transport ventilator (ATV), BIPAP/CPAP, AND PEEP devices.
	18.03 Assessment and management of adequate and inadequate ventilation to include effect of ventilation on cardiac output.
19.0	**Scene Size-Up:** Demonstrate a complex depth, comprehensive breadth of knowledge of scene management. The student will be able to:
	19.01 Describe common hazards found at the scene of a trauma and a medical patient.
	19.02 Discuss common mechanisms of injury/ nature of illness. ***(MOI/NOI)***.
	19.03 Explain the rationale for crew members to evaluate scene safety prior to entering.

	19.04 Demonstrate the scene-size-up to include: • Scene safety/situational awareness • Scene management • Impact of the environment on patient care • Addressing hazards • Violence • Need for additional or specialized resources • Standard precautions • Multiple patient situations
20.0	**Primary Assessment:** Demonstrate a complex depth, comprehensive breadth of knowledge of the primary assessment for all patient situations. The student will be able to:
	20.01 Summarize the elements of a general impression of the patient.
	20.02 Explain the reason for performing a primary assessment.
	20.03 Discuss and demonstrate methods of assessing levels of responsiveness using AVPU.
	20.04 Discuss and demonstrate methods of assessing the airway, patients of all ages.
	20.05 Describe and demonstrate methods used for assessing if a patient is breathing, patients of all ages.
	20.06 Differentiate between a patient with adequate and inadequate breathing.
	20.07 Describe and demonstrate the methods used to obtain a pulse, patients of all ages.
	20.08 Discuss and demonstrate assessing the patient for external bleeding.
	20.09 Describe and demonstrate the assessment and interruption of skin color, temperature, moisture, and capillary refill patients of all ages.
	20.10 Explain the reasons for prioritizing a patient for care and transport.
	20.11 Describe when it is appropriate to expose the patient completely.
	20.12 Differentiate between critical, and non-life-threatening patient presentations. *and integration of treatment/procedures needed to preserve life.*
21.0	**History Taking:** Demonstrate a complex depth, comprehensive breath of knowledge of the components of history taking. The student will be able to:
	21.01 Determine and investigate the chief complaint. ***(i.e., MOI, NOI).***
	21.02 Describe the components of the patient history.
	21.03 Explain the importance of obtaining a SAMPLE and OPQRST history.

	21.04 Acknowledge the feelings patients experience during assessment.
	21.05 Discuss the value of obtaining a family and social history.
	21.06 Describe examples of different techniques (***i.e., therapeutic communication and adaptive interview techniques)*** the paramedic may use to obtain information from patients, family, or bystanders during the history taking process.
	21.07 Analyze the impact of cultural and linguistic factors on history-taking in diverse patient populations served by Mobile Integrated Health.
	21.08 Evaluate the use of technology, such as electronic health records and telemedicine, to enhance the history-taking process within MIH.
	21.09 Discuss the importance of integrating community resources and support systems into the patient's history to inform care planning.
	21.10 Demonstrate the ability to identify and address potential mental health concerns during the history-taking process in MIH settings.
	21.11 Explain the significance of continuity of care in history-taking and how it influences treatment decisions and patient outcomes in Mobile Integrated Health.
22.0	**Secondary Assessment: Demonstrate** a complex depth, comprehensive breadth of knowledge of techniques used for secondary assessment patients of all ages. The student will be able to:
	22.01 Review EMT standards and benchmarks for secondary assessment. (***i.e., assessment of vital signs, pain, techniques of physical exam).***
	22.02 Describe the techniques of inspection, palpation, percussion, and auscultation.
	22.03 Discuss the limitations of conducting a physical exam in the out-of-hospital environment.
	22.04 Demonstrate the examination of the patient including all major body systems and anatomical regions.
	22.05 Distinguish the importance of abnormal assessment findings in all the major body systems and anatomical regions.
	22.06 Describe the evaluation of patient's perfusion status based on findings in the initial assessment.
	22.07 State the reasons for performing a rapid trauma assessment.
	22.08 Discuss the reason for performing a focused history and physical exam.
	22.09 Discuss appropriate gender and cultural considerations regarding assessment.
	22.10 Discuss medical identification devices/ systems.
23.0	**Monitoring Devices:** Demonstrate a fundamental depth, foundational breadth of knowledge of monitoring devices within the scope of practice of the paramedic. The student will be able to:
	23.01 Describe the purpose, indications, procedure, normal findings, and limitations of the following patient monitoring technologies, including but not limited to: • Continuous ECG monitoring • 12-Lead ECG

- ***EtCO₂*** capnography (wave form)
- Methemoglobin monitoring
- Total hemoglobin
- Basic blood chemistry
- Ultrasound
- Other devices identified at the EMT level

23.02 Demonstrate the use of the following patient monitoring technologies, including but not limited to:

- Continuous ECG monitoring
- 12-Lead ECG ***(i.e., acquisition, interpretation, and transmission***).
- Capnography (wave form)
- Other devices identified at the EMT level

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24.0 **Reassessment:** Demonstrate a complex depth, comprehensive breadth of knowledge of how and when to perform a reassessment for all patient situations. The student will be able to:

24.01 Describe the components of reassessment and demonstrate the skills involved.

24.02 Discuss the reasons for reassessment. ***of the patient***.

24.03 Explain trending assessment components and its value to other health professionals who assume care of the patient.

24.04 Demonstrate reassessment of patients, patients of all ages.

25.0 **Medical Overview: Demonstrate** a complex depth, comprehensive breadth of knowledge of pathophysiology, assessment, and management of medical complaints. The student will be able to:

25.01 Identify factors that complicate patient assessment including:

- Scene safety
- Environmental factors
- Chief complaint
- Paramedic preconceptions
- Distracting injuries
- Tunnel vision
- Patient cooperation
- Paramedic attitude

25.02 Discuss forming a field impression and utilizing available information to determine a different diagnosis.

	25.03 Discuss pathophysiology, assessment, and management of a medical complaints to include. • Transport mode • Destination decisions
26.0	**Neurology:** Demonstrate a complex depth, comprehensive breadth of knowledge of neurologic disorders/emergencies, patients of all ages. The student will be able to:
	26.01 Identify the risk factors associated with nervous system dysfunction.
	26.02 Review the anatomy and physiology of the organs and structures related to the nervous system.
	26.03 Discuss the pathophysiology, signs and symptoms and demonstrate the assessment and management of patients with the following neurological conditions, including but not limited to: • Coma • **Decreased level of responsiveness** • Seizures • Syncope • Transient ischemic attack • Stroke and intracranial hemorrhage • Degenerative neurologic diseases (**i.e., dementia, Alzheimer's and Parkinson's disease)** • Chronic alcoholism • Back disorders • Headache • Brief Resolved Unexplained Event (BRUE) • Hydrocephalus – CSF diversion devices or shunts • Other neurological disorders to be determined locally
	26.04 Describe and differentiate the major types of seizures.
	26.05 Describe the types of stroke.
	26.06 Describe the significance of the prevalence of neurologic disorders in the United States.
	26.07 Discuss screen tools for assessment of stroke and large vessel occlusion.
	26.08 Demonstrate the use of stroke screening tools and appropriate decision-making regarding transport destination for a stroke patient.
27.0	**Abdominal and Gastrointestinal Disorders:** Demonstrate a complex depth, comprehensive breadth of knowledge of abdominal and gastrointestinal disorders/emergencies, patients of all ages. The student will be able to:
	27.01 Review the anatomy and physiology of the organs and structures related to gastrointestinal diseases.
	27.02 Differentiate between hemorrhagic and non-hemorrhagic causes of abdominal pain.
	27.03 Describe the technique for performing a comprehensive physical examination on a patient complaining of abdominal pain.

	27.04 Discuss the pathophysiology, signs, and symptoms, and demonstrate the assessment, and management of patients with the following abdominal and gastrointestinal disorders, including but not limited to: • Both upper and lower gastrointestinal bleeding • Acute gastroenteritis. • Colitis. • Diverticulitis. • Appendicitis. • Peptic ulcer disease. • Bowel obstruction. • Crohn's disease. • Pancreatitis. • Esophageal varices. • Hemorrhoids. • Cholecystitis. • Acute hepatitis.
	27.05 Identify patients at risk for gastrointestinal emergencies.
	27.06 Demonstrate how to auscultate the abdomen to assess for diminished, absent or abnormal bowel sounds.
28.0	**Immunology:** Demonstrate a complex depth, comprehensive breadth of knowledge of immunology disorders/emergencies, patients of all ages. The student will be able to:
	28.01 Define and differentiate: • Allergic reaction. • Anaphylaxis • Antigens • Antibodies • Anaphylactoid reaction
	28.02 Review the anatomy and physiology of the organs and structures related to anaphylaxis.
	28.03 Describe the prevention of anaphylaxis and appropriate patient education.
	28.04 Review the pathophysiology of allergy and anaphylaxis.
	28.05 Describe the common methods of entry of allergens into the body.
	28.06 Review common antigens most frequently associated with anaphylaxis.
	28.07 Differentiate among the various treatment and pharmacological interventions used in the management of anaphylaxis and allergic reaction.
29.0	**Infectious Diseases:** Demonstrate a complex depth, comprehensive breadth of knowledge of assessment and management of a patient who may have an infectious disease, patients of all ages. The student will be able to:

	29.01 Review EMT standards and benchmarks for infectious disease.
	29.02 Review the specific anatomy and physiology pertinent to infectious and communicable diseases.
	29.03 Describe the steps of an infectious process.
	29.04 Describe and differentiate infectious agents, including bacteria, viruses, fungi, protozoans, and helminths (worms).
	29.05 Review characteristics of the immune system.
	29.06 Perform an assessment of a patient with an infectious/communicable disease.
	29.07 Effectively and safely manage a patient with an infectious/communicable disease.
	29.08 Review public health principles related to infectious disease.
	29.09 Review the roles of local, state, and federal agencies involved in infectious disease surveillance and outbreaks.
	29.10 Describe the interactions of the agent, host, and environment as determining factors in disease transmission.
	29.11 Describes the EMS professional's responsibilities as well as their rights under the Ryan White Act.
	29.12 Discuss the pathophysiology, signs, symptoms, assessment, and management and risk factors of significant health concerns.
	29.13 Discuss the characteristics of, and organisms associated with, febrile and afebrile respiratory disease.
	29.14 Describe the EMS provider's role in patient education and preventing disease transmission.
	29.15 Review the pathophysiology, risk factors, assessment, and prehospital management of sepsis/systemic inflammatory response syndrome (SIRS).
	29.16 Knowledge of: • Antibiotic resistance infections • Vaccine-preventable diseases • Emerging infectious disease
30.0	**Endocrine Disorders: Demonstrate** a complex depth, comprehensive breadth of knowledge in endocrine disorders/emergencies, patients of all ages. The student will be able to:
	30.01 Identify the risk factors related to disorders of the endocrine system.
	30.02 Review the anatomy and physiology of organs and structures related to endocrinologic diseases.
	30.03 Discuss the pathophysiology, signs and symptoms and demonstrate the assessment, and management of patients with the following endocrinologic emergencies: • hypoglycemia • hyperglycemia

	• diabetic ketoacidosis • Cushing's syndrome • adrenal insufficiency • pituitary disorders • thyroid disorders
31.0	**Psychiatric, Cognitive and Behavioral:** Demonstrate a complex depth, comprehensive breadth of knowledge regarding the assessment and management of psychiatric disorders, cognitive and behavioral emergencies, patients of all ages. The student will be able to:
31.01	Differentiate among behavior, psychiatric disorders, and behavioral emergencies.
31.02	Basic principles of the mental health system • Patterns of violence, abuse, and neglect • Suicide ideation • Excited delirium • Anxiety • Depression • Medical fear • Substance use disorder/ addictive behavior. • PTSD • Acute psychosis • Cognitive disorders • Thought disorders (Mood disorders, Neurotic disorders, Somatoform disorders, Factitious disorders) • Personality disorders
31.03	Discuss the pathophysiology of common psychiatric disorders and behavioral emergencies.
31.04	Discuss the general factors that may cause an alteration in a patient's behavior.
31.05	Discuss the factors/signs or symptoms of various psychiatric emergencies to include suicide.
31.06	Manage a behavioral emergency scenario applying knowledge of medical/legal Florida Statutes.
31.07	Describe and demonstrate the assessment and management of the patient experiencing a behavioral or psychiatric emergency.
31.08	Describe the biological, psychosocial, and sociocultural influences on psychiatric disorders.
31.09	Describe the special considerations for the safety of the EMS provider, and EMS crew, the patient and bystanders when dealing with behavioral and psychiatric emergencies.
31.10	Explain the importance of provider behavior and communication in the care of a patient with a behavioral emergency.
31.11	Describe and demonstrate methods of restraint that may be used in the management of a patient with a behavioral emergency and possible legal implication.

	31.12 List the risk factors (including behaviors) for suicide.
32.0	**Cardiovascular:** Demonstrate a complex depth, comprehensive breadth of knowledge of cardiovascular disorders/emergencies, patients of all ages. The student will be able to:
	32.01 Describe the epidemiology, incidence, morbidity and mortality of cardiovascular disease.
	32.02 Identify the risk factors of coronary artery disease.
	32.03 Review the anatomy and physiology of the heart and circulatory system.
	32.04 Discuss the electrophysiology of the heart.
	32.05 Discuss and demonstrate ECG monitoring, 12 Lead placement, acquisition, and interpretation.
	32.06 Define and give examples of positive and negative inotropes, chronotropes and dromotropes.
	32.07 Identify the normal characteristics of the point of maximal impulse (PMI).
	32.08 Discuss the normal and abnormal heart sounds and how they relate to hemodynamic events in the cardiac cycle.
	32.09 Describe a systematic approach to the analysis and interpretation of cardiac dysrhythmias.
	32.10 Describe the conditions of pulseless electrical activity.
	32.11 Compare and contrast electrotherapy to include pacing.
	32.12 Discuss the pathophysiology, signs and symptoms and demonstrate the assessment, and management of patients following conditions including the development of a treatment plan, including but not limited to: • Angina • Myocardial infarction STEMI/Non-STEMI • Congestive heart failure • Cardiac tamponade • Cardiogenic shock • Hypertension and acute hypertensive states • Cardiac arrest • Vascular disorders • Hypertrophic cardiomyopathies • Infectious diseases of the heart • Congenital abnormalities • Thromboembolism • Aortic aneurysm/dissection • LVAD

	• Heart Transplant
32.13	List other clinical conditions that may mimic signs and symptoms of coronary artery disease and angina pectoris.
32.14	Compare fibrinolysis from percutaneous intervention as reperfusion techniques used in patients with AMI or suspected AMI and describe the "window of opportunity" as it pertains to reperfusion of a myocardial infarction.
32.15	List the characteristics of a patient eligible for thrombolytic therapy.
32.16	Define the term acute pulmonary edema and describe its relationship to left ventricular failure.
32.17	Discuss preload, afterload and left ventricular end-diastolic pressure and relate each to the pathophysiology of heart failure.
32.18	Identify non-cardiac causes of cardiac arrest.
32.19	Discuss the components of post resuscitation care including how to determine the return of spontaneous circulation (ROSC).
32.20	Identify circumstances and situations where resuscitation efforts would not be initiated or would be terminated.
32.21	Conditions that predispose patients to cardiac rhythm disturbances including WPW, Brugada, long QT syndrome and others
32.22	Understand the principles of mean arterial pressure and the components used to calculate the pressure.
33.0	**Toxicology:** Demonstrate a complex depth, comprehensive breadth of knowledge of the assessment and management of toxicology emergencies including psychosocial aspects of age-related assessment and treatment modifications for the major or common diseases and patients of all ages. The student will be able to:
33.01	Define and differentiate among toxicology, poisoning, and overdose.
33.02	Describe the pathophysiology and signs and symptoms of the following toxicological emergencies, including but not limited to: • Food poisoning • Carbon monoxide poisoning • Cyanide poisoning • Exposure to acid or alkaline substance • Exposure to hydrocarbons • Methanol ingestion • Isopropanol ingestion • Ethylene glycol ingestion • Exposure to poisonous substances • Drug withdrawal • Alcoholic syndrome • Withdrawal syndrome (including delirium tremens) • Illicit drug use • Medication overdose

	• Opioid overdose • Organophosphate overdose • Toxidromes • Cholinergic • Anticholinergic • Sympathomimetic • Sedative / hypnotics • Opioid • Corrosive • Knockdown • Pulmonary Hypertension
33.03	Discuss the role of the Poison Control Center with the nationwide contact number 800-222-1222 in the United States.
33.04	Review various ways that toxins enter the body.
33.05	Discuss and demonstrate the assessment and management for the patient with a toxicological emergency.
33.06	Explain the rationale for contacting medical direction early in the prehospital management of a patient with a toxicological emergency.

33.07	Review the following for Narcan (naloxone):
	• generic and trade names
	• medication forms
	• dose
	• administration
	• contraindications
	  ○ Medications
	  ○ Drugs of Abuse
	  ○ Non-FDA approved medications and supplements
	  ○ Serotonin Syndrome
	  ○ Malignant Hyperthermia

34.0	**Respiratory:** Demonstrate a complex depth, comprehensive breadth of knowledge of the assessment and management of respiratory disorders, include psychosocial aspects of age-related assessment and treatment modifications for the major or common diseases and/ or emergencies associated emergencies, patients of all ages. The student will be able to:
34.01	Discuss the epidemiology, morbidity, and mortality of respiratory illness in the United States.
34.02	Review hypoventilation and hyperventilation and outline the conditions with which they are often associated.
34.03	Review the anatomy, physiology and functions of the respiratory system.

34.04	Discuss those factors that contribute to the formation of a general impression and degree of respiratory distress.
34.05	Identify breathing patterns that are associated with respiratory distress and neurologic insults and their correlation with the signs of increased work of breathing.
34.06	Review between normal and abnormal breath/lung sounds and its physiologic significance.
34.07	Explain the concepts of hypoxic drive and auto-PEEP as they relate to the COPD patient.
34.08	Discuss the pathophysiology, signs and symptoms and demonstrate the assessment, and management of patients with the following respiratory conditions, including but not limited to: • Pulmonary infections (upper and lower airway) • Atelectasis • Anatomic or foreign body obstruction • Aspiration • Asthma • Emphysema • Chronic bronchitis • Spontaneous pneumothorax • Pleural effusion • Pulmonary embolism • Cancer • Toxic inhalations • Pulmonary edema • Acute respiratory distress syndrome (ARDS) • Pneumonia • Neoplasms of the lung • Hyperventilation syndrome • Upper airway disease • RSV • Croup • Epiglottitis • COPD • Broncho pulmonary dysplasia • Respiratory Distress • Respiratory Failure • Respiratory Arrest
35.0	**Hematology:** Demonstrate a complex depth, foundational breadth of knowledge of the assessment, and management of hematology disorders/emergencies, patients of all ages. The student will be able to:
35.01	Identify the role of heredity in the risk for hematologic disorders.

	35.02 Review the anatomy and physiology of the hematopoietic system.
	35.03 Describe volume and volume-control related to the hematopoietic system.
	35.04 Explain the significance of the hematocrit with respect to red cell size and number.
	35.05 Explain the correlation of the RBC count, hematocrit and hemoglobin values.
	35.06 Recognize medications used to decrease the risk of thrombosis.
	35.07 Identify blood groups.
	35.08 Discuss the pathophysiology, signs and symptoms and demonstrate the assessment, and management of patients with the following conditions, including but not limited to: • Anemia • Leukemia • Lymphomas • Polycythemia • Disseminated intravascular coagulopathy • Hemophilia • Sickle cell disease • Multiple myeloma • Leukopenia/neutropenia • Leukocytosis • Thrombocytosis • Thrombocytopenia • Transfusion complications • Hemostatic disorders
36.0	**Genitourinary/Renal:** Demonstrate a complex depth, comprehensive breadth of knowledge of genitourinary and renal emergencies to include psychosocial aspects of age-related assessment and treatment modifications for the major or common diseases and/or emergencies, patients of all ages. The student will be able to:
	36.01 Describe the epidemiology, incidence, morbidity, mortality, and risk factors of urological emergencies.
	36.02 Review the anatomy and physiology of the organs and structures related to urogenital diseases.
	36.03 Discuss referred pain and visceral pain as it relates to urology.
	36.04 Discuss the pathophysiology, signs and symptoms and demonstrate the assessment, and management of patients of the following urologic and renal conditions, including but not limited to: • Acute renal failure • Chronic renal failure

	• Complications related to hemodialysis and peritoneal dialysis. • Renal calculi • Priapism • Testicular torsion • Urinary tract infection • Complications related to urinary catheter management (not insertion) • Sexual assault (female and male) • Infection • Male genital tract conditions
	36.05 Review fluids, electrolytes, and acid-based disturbances.
37.0	**Gynecology:** Demonstrate a complex depth, comprehensive breadth of knowledge of the assessment findings and the management of gynecology disorders Include psychosocial aspects of age-related assessment and treatment modifications for the major or common diseases and/or /emergencies, patients of all ages. The student will be able to:
	37.01 Review anatomy and physiology of the female reproductive system.
	37.02 Identify the normal events of the menstrual and ovarian cycle.
	37.03 Discuss the pathophysiology, signs and symptoms and demonstrate the assessment, and management of patients with specific gynecological emergencies, including but not limited to: • Infection (including pelvic inflammatory disease, Bartholin's abscess, and vaginitis/ vulvovaginitis) • Ovarian cyst and ruptured ovarian cyst • Ovarian torsion • Endometriosis • Dysfunctional uterine bleeding • Prolapsed uterus • Vaginal foreign body • Vaginal hemorrhage
	37.04 Describe the importance of maintaining a patient's modesty and privacy while still being able to obtain necessary information.
	37.05 Discuss the need to provide care for a patient of sexual assault, while still preventing destruction of crime scene information.
38.0	**Non-Traumatic Musculoskeletal Disorders:** Demonstrate a fundamental depth, foundation breadth of knowledge of the assessment and management of non-traumatic fractures, patients of all ages. The student will be able to:
	38.01 Review the anatomy and physiology of the musculoskeletal system
	38.02 Discuss the pathophysiology, signs and symptoms and demonstrate the assessment and management of patients with musculoskeletal emergencies, including but not limited to: • Osteomyelitis and tumors • Disc disorders, lower back pain (cauda equine syndrome, sprain, and strain.)

- Joint abnormalities
- Muscle abnormalities
- Overuse syndrome
- Soft tissue infections
- Non-traumatic fractures
- Disorders of the spine
- Rhabdomyolysis

39.0 **Diseases of the Eyes, Ears, Nose, and Throat:** Demonstrate a fundamental depth, foundational breadth of knowledge of the assessment and management of common or major diseases of the eyes, ears, nose and throat, patients of all ages. The student will be able to:

39.01 Review the anatomy and physiology of the eyes, ears, nose, and throat.

39.02 Discuss the pathophysiology, signs, and symptoms and demonstrate the assessment and management of patients with various eye diseases/injuries, including but not limited to:

- Burns of eye and adnexa
- Conjunctivitis
- Corneal abrasions
- Foreign body
- Inflammation of the eyelid
- Glaucoma
- Hyphemia
- Iritis
- Papilledema
- Retinal detachment and defect
- Cellulitis of orbit

39.03 Discuss the pathophysiology, signs, and symptoms and demonstrate the assessment and management of patients with various ear diseases/injuries including:

- foreign body
- impacted cerumen
- labyrinthitis
- Meniere's disease
- otitis external and media
- perforated tympanic membrane

39.04 Discuss the pathophysiology, signs, and symptoms and demonstrate the assessment and management of patients with various nose diseases/injuries including:

- epistaxis
- foreign body intrusion
- rhinitis
- sinusitis

	39.05 Discuss the pathophysiology, signs and symptoms and demonstrate the assessment and management of patients with oropharynx/throat diseases/injuries including: • dentalgia and dental abscess • diseases of oral soft tissue/ Ludwig's angina • foreign body intrusion • epiglottitis • laryngitis • tracheitis • oral candidiasis • peritonsillar abscess • pharyngitis/tonsillitis • temporomandibular joint disorders
40.0	**Shock:** Demonstrate the integration of a comprehensive knowledge of causes and pathophysiology into the management of shock (Include psychosocial aspects of age- related assessment and treatment modifications for pediatric and geriatric patients). The student will be able to:
	40.01 Essential components in normal perfusion and Physiologic response
	40.02 Define and differentiate between compensated and decompensated shock for all types of shock.
	40.03 Review the pathophysiology and demonstrate the assessment and management of the types of shock • Distributive, Neurogenic, Psychogenic, Hemorrhagic, and Obstructive
	40.04 Describe the epidemiology, including premorbid and comorbid conditions and prevention strategies, for shock and hemorrhage.
	40.05 Review the anatomy and physiology of the cardiovascular and respiratory systems.
	40.06 Contrast the physiology of blood flow during normal states, peri-arrest, cardiac arrest and shock.
	40.07 Discuss and demonstrate the assessment and management of shock.
	40.08 Review the management of hemorrhage. • Discuss and demonstrate the assessment and management of internal hemorrhage • Discuss and demonstrate the assessment and management of external hemorrhage • Review the stages and classifications of hemorrhage.
	40.09 Circulatory assist devices
	40.10 Discuss appropriate fluid management.
	40.11 Describe the effects of decreased perfusion at the capillary level.
	40.12 Relate pulse pressure changes to perfusion status.

	40.13 Relate orthostatic vital sign changes to perfusion status.
	40.14 Discuss and differentiate the physiological manifestations of shock, patients of all ages.
41.0	**Resuscitation from Cardiac Arrest:** Demonstrate the integration of a comprehensive knowledge of causes and pathophysiology into the management of cardiac arrest and respiratory failure (Include psychosocial aspects of age- related assessment and treatment modifications for pediatric and geriatric patients). The student will be able to:
	41.01 Review the following for the cardiac arrest victim: • Epidemiology • CPR Pathophysiology • Physiology of blood flow during external chest compressions • Resuscitation success/research • Ethical issues in resuscitation
	41.02 Describe the epidemiology, including premorbid and comorbid conditions and prevention strategies, for Cardiac Arrest • Termination of resuscitation
	41.03 Review defibrillation and cardioversion to include manual techniques, automatic and semi-automated devices. • Resuscitation system components
	41.04 Discuss causes, pathophysiology, signs, and symptoms and management of special arrest and peri-arrest conditions, including but not limited to: • Electrolyte disorders • Toxic exposures • Drowning • Hypothermia • Near-Fatal Asthma • Anaphylaxis • Trauma • Pregnancy • Electrical shock and lightning strikes
	41.05 Review post resuscitative care include, temperature regulation, glucose/electrolyte management.
42.0	**Trauma Overview:** Demonstrate a complex depth, comprehensive breadth of knowledge of pathophysiology, assessment, and management of trauma patients, patients of all ages. The student will be able to:
	42.01 Review the pathophysiology of the trauma patient.
	42.02 Review the components of comprehensive trauma systems and levels of trauma centers.
	42.03 Review the considerations for different transportation modes to a trauma center.
	42.04 Discuss the kinematics of blunt and penetrating trauma.

	42.05 Discus and describe significant and non-significant mechanism of injury (MOI) and provide examples of each.
	42.06 Discuss and demonstrate the application of State of Florida's trauma scorecard methodologies as required in Florida Statute and Florida Administrative Code.
	42.07 Review the National Trauma Triage Protocol of Injured Patients.
	42.08 Review forming a field impression and utilizing available information to determine a differential diagnosis.
	42.09 Review the need for rapid intervention transport of the trauma patient.
43.0	**Multi-Systems Trauma:** Demonstrate a complex depth, comprehensive breadth of knowledge of multi-system trauma and blast injuries. The student will be able to:
	43.01 Review the priority of care in the multisystem trauma patient.
	43.02 Identify and Explain Blast Injuries.
	43.03 Explain which ALS interventions should occur prior to a transport decision and during transport
44.0	**Bleeding: Demonstrate** a complex depth, comprehension breadth of knowledge of pathophysiology, assessment and management of bleeding, patients of all ages. The student will be able to:
	44.01 Review the compensatory mechanism in hemorrhagic shock.
	44.02 Review the administration of medications to assist in the maintenance of homeostasis.
	44.03 Review the maintenance of tissue oxygenation in a bleeding patient.
	44.04 Discuss appropriate fluid resuscitation for the patient in hemorrhagic shock.
	44.05 Review the different methods/modalities of controlling bleeding.
45.0	**Chest Trauma: Demonstrate** a complex depth, comprehensive breadth of knowledge of pathophysiology, assessment, and management of chest trauma, patients of all ages. The student will be able to:
	45.01 Review the anatomy and physiology of the organs and structures related to thoracic injuries. • Blunt vs Penetrating Mechanisms
	45.02 Review the pathophysiology, signs and symptoms and mechanism of injury (MOI) of the following injuries, including but not limited to: • Myocardial injuries o Pericardial tamponade o Myocardial contusion o Myocardial rupture • Vascular injury o Aortic dissection / disruption o Pulmonary contusion

	• Hemothorax • Pneumothorax • Hemopneumothorax • Open chest wound • Cardiac tamponade • Commotio cordis • Tracheobronchial disruption • Diaphragmatic rupture and injury • Traumatic asphyxia • Rib fracture • Flail segment • Sternal fracture • Vascular injuries • Impaled objects • Evisceration/shock
45.03	Discuss monitoring of chest tubes.
45.04	Demonstrate the following techniques of management for thoracic injuries: needle decompression, elective intubation, ECG monitoring. oxygenation, and ventilation.
46.0	**Abdominal and Genitourinary Trauma:** Demonstrate a complex depth, comprehensive breadth of knowledge of pathophysiology, assessment, and management of abdominal and genitourinary trauma, patients of all ages. The student will be able to:
46.01	Review the anatomy and physiology of organs and structures related to abdominal injuries.
46.02	Describe the mechanism of injury for and types of open and closed abdominal and retroperitoneal injuries involving seat belts, penetrating, blunt and evisceration.
46.03	Describe and demonstrate the pathophysiology, signs and symptoms and the assessment and management for, including but not limited to: • Pelvic fractures. • Solid organ injuries • Hollow organ injuries • Abdominal vascular injuries • Retroperitoneal space (kidneys) • Genitourinary system
46.04	Review the psychological considerations associated with genitourinary injuries.
47.0	**Orthopedic Trauma:** Demonstrate a fundamental depth, foundational breadth of knowledge of pathophysiology, assessment, and management of orthopedic trauma patients of all ages. (Include psychosocial aspects of age- related assessment and treatment modifications for pediatric and geriatric patients). The student will be able to:
47.01	Review the anatomy and physiology of the musculoskeletal system, include the healing process.

	47.02 Discuss pathophysiology, signs and symptoms, and MOI for orthopedic trauma.
	47.03 Define the different types of orthopedic trauma including fracture classifications. • Upper Vs Lower • Open/Closed Fractures • Pelvic • Dislocations • Sprains • Strains
	47.04 List the 6 “P” orthopedic injury assessment. • Pain • Paresthesia • Poikilothermia • Pallor • Paralysis • Pulselessness
	47.05 Discuss the following management techniques: • Heat therapy • Cold therapy • Splinting
	47.06 Describe and demonstrate the assessment and management of a patient with a suspected orthopedic trauma including medication administration (analgesics and anxiolytics).
	47.07 Discuss the need for assessment of distal pulses, motor, and sensation before and after splinting.
	47.08 Define Luxation and Subluxation.
	47.09 Explain the rationale for splinting at the scene versus load and go.
	47.10 Demonstrate the proper use various splinting materials and devices to include improvised and traction splints.
	47.11 Discuss and demonstrate the assessment and management of compartment and crush syndrome: • destination decision • rhabdomyolysis
	47.12 Discuss the pathophysiology and demonstrate the assessment and management of a tendon injury to the knee (patellar), shoulder, and Achilles.
	47.13 Discuss the proper procedure to package an amputated body part for replantation.
48.0	**Soft Tissue Trauma:** Demonstrate a complex depth, comprehensive breadth of knowledge of pathophysiology, assessment, and management of soft tissue trauma, patients of all ages . The student will be able to:
	48.01 Review anatomy and physiology and identify the major functions of the integumentary system.

48.02	Discuss the pathophysiology of soft tissue injuries and the healing process including: • Inflammation • Epithelialization • Neovascularization • Collagen Synthesis • Alterations in wound healing • Abnormal scar formation
48.03	Describe and demonstrate the assessment and management of various soft tissue injuries. • Wounds (avulsion, bite, laceration, puncture, incision) • Crush/compartment syndrome • High-pressure injection injury
48.04	Identify types of burn injuries including: • Thermal burn • Chemical burn • Electrical burn • Radiation burn
48.05	Describe the depth classification of burn injuries including: • Superficial burn • Partial-thickness burn • Full-thickness burn • Other depth classification
48.06	Describe and demonstrate methods for determining body surface area percentage of a burn injury including the “rule of nines”, the “rule of palms”, and other methods.
48.07	Explain how the seriousness of a burn is related to its depth and percentage of body surface area (BSA) involved.
48.08	Review the various management techniques for hemorrhage control.
48.09	Differentiate among the types of injuries requiring the use of occlusive versus non-occlusive dressing.
48.10	Demonstrate the assessment and management of specific burn injuries including: • Thermal • Inhalation • Chemical • Electrical • Radiation
48.11	Describe the pathophysiologic complications and systemic complications of a burn injury.
48.12	Discuss comorbidities in burn patients.

	48.13 Describe the management of a burn injury, including airway and ventilation, circulation, pharmacological, non-pharmacological, transport considerations, psychological support/communication strategies, and other management.
	48.14 Describe the types of chemicals and their burning processes and a chemical burn injury to the eye.
	48.15 Discuss appropriate fluid resuscitation for burn patients.
49.0	**Head, Face, Neck, and Spine:** Demonstrate a fundamental depth, foundational breadth of knowledge of head, face, neck, and spine trauma, patients of all ages. The student will be able to:
	49.01 Discuss types of and potential complications of facial injuries to include life threating.
	49.02 Discuss Anatomy, assessment and management, and a field impression for injuries to the following areas: • Eye(s) • Nose • Throat/neck • Face • Mouth • Ear(s)
	49.03 Distinguish between an open and closed head injury.
	49.04 Define and explain the process involved with increasing ICP.
	49.05 Describe and demonstrate the assessment and general management of the head/ brain injury patient, including pharmacological and non-pharmacological treatment.
	49.06 Discuss the pathophysiology, signs and symptoms, and assessment and management for a patient for each of the following conditions: • Skull fracture • Cerebral contusion • Intracranial hemorrhage • Epidural, subdural, intracerebral, and subarachnoid • Perforated tympanic membranes • Orbital fracture / Globe rupture • Severe Epistaxis • Mandibular fracture • Dental fracture • Facial / Unstable Facial fracture • Penetrating neck trauma • Spine trauma • Shaken baby syndrome. • Laryngotracheal injuries

	49.07 Review various methods for stabilization and removal of a helmet.
50.0	**Nervous System Trauma:** Demonstrate a fundamental depth, foundational breadth of knowledge of nervous system trauma, patients of all ages. The student will be able to:
	50.01 Review the anatomy and physiology of the central nervous system, brain, spinal cord, skull and spinal column.
	50.02 Discuss pathophysiology, signs and symptoms, assessment, and management of the following nervous system injury including: • Cauda Equine syndrome • Peripheral / Root nerve injuries • Intracerebral hemorrhage • Cranial fractures • Traumatic Brain / Brain tissue injuries • Spinal cord injuries • Brown-Sequard Syndrome • Anterior cord syndrome • Central cord syndrome • Spinal shock
	50.03 Discuss the mechanism of injury which would result in a nervous system injury.
	50.04 Review the rationale for and potential for motion restriction for the entire spine when a cervical spine injury is suspected
	50.05 Discuss the research involving the management of nervous system injuries and patient management.
51.0	**Special Considerations in Trauma:** Demonstrate a complex depth, comprehensive breadth of knowledge of special considerations in trauma, patients of all ages. The student will be able to:
	51.01 Integrate the assessment and management differences associated with the following special populations: • Pregnancy • Pediatric • Geriatric • Cognitively impaired patient

Course Number: EMS0212 **Occupational Completion Point: A** **Paramedic III – 426 hours**	
52.0	**Environmental Emergencies:** Demonstrate a complex depth, comprehensive breadth of knowledge of environmental emergencies, patients of all ages. The student will be able to:
	52.01 Discuss the pathophysiology, signs and symptoms, assessment and management and MOI of the following: • Drowning and water related incidents • Temperature-related illness

	• Bites and envenomation • Diving injuries • Lightning (electrical) injury • High altitude illness
52.02	Identify environmental factors that may cause illness, exacerbate preexisting illness and complicate treatment or transport decisions.
52.03	Review several methods of temperature monitoring.
52.04	Describe the general process of thermal regulation, including substances used and wastes generated.
52.05	Define fever and discuss its pathophysiologic mechanism.
52.06	Discuss the role of fluid therapy in the treatment of temperature related emergencies.
52.07	Review the gas laws related to the pathophysiology of injury in a submersion emergency.
52.08	Describe the function of the Divers Alert Network (DAN) and how its members may aid in the management of diving-related illnesses.
52.09	Differentiate among the various treatments and interventions for the management of diving accidents.
52.10	Describe the specific function and benefit of hyperbaric oxygen therapy for the management of diving accidents.
53.0	**Obstetrics:** Demonstrate a complex depth, comprehensive breadth of knowledge of the management of the obstetric patient within the scope of practice of the paramedic. The student will be able to:
53.01	Review the anatomy and physiology of the reproductive system.
53.02	Define the stages of labor and discuss how to assess them.
53.03	Assessment of the pregnant patient.
53.04	Differentiate between cephalic and abnormal delivery.
53.05	Vaginal bleeding in the pregnant patient.
53.06	Normal Delivery.
53.07	Describe the management of a patient with pre-delivery emergencies.
53.08	Discuss and demonstrate the patient care for all stages of labor in a cephalic delivery for the mother and the newborn.
53.09	Describe the procedures for handling complications of delivery.
53.10	Describe the management of the mother post-delivery.

	○ Demonstrate the procedures for handling complications of pregnancy including per-eclampsia and high risk. • Ectopic pregnancy • Abnormal delivery (nuchal cord, prolapsed cord, breech, shoulder dystocia, prematurity, multiparity) ○ Third trimester and antepartum bleeding • (Placenta previa. placental abruption) ○ Pathophysiology of complications of pregnancy ○ Spontaneous abortion/miscarriage ○ Complications of labor (fetal distress, premature rupture of membranes, rupture of uterus) ○ Hyperemesis gravidarum
53.11	Describe the management of the mother post-delivery.
53.12	Discuss and demonstrate the patient care measures for all stages of labor in abnormal deliveries for the mother and the newborn.
53.13	Describe special considerations when meconium is present in amniotic fluid or during delivery.
54.0	**Neonatal Care:** Demonstrate a complex depth, comprehensive breadth of knowledge of the management of the neonatal patient within the scope of practice of the paramedic. The student will be able to:
54.01	Review the term neonate.
54.02	Identify antepartum and intrapartum factors that can affect the neonate.
54.03	Discuss pulmonary perfusion and asphyxia.
54.04	Calculate the Apgar score given various neonate situations.
54.05	Review resuscitation equipment and procedures for the neonate
54.06	Newborn stabilization
54.07	Neonatal resuscitation
54.08	Anatomy and physiology of neonatal circulation
54.09	Determine when an orogastric tube should be inserted during positive-pressure ventilation.
54.10	Discuss the pathophysiology, signs and symptoms, assessment and management of the following, including but not limited to: • Apnea • Bradycardia • Acidosis • Pneumothorax • Meconium-stained • Low blood volume

	• Dysphemistic hernia • Respiratory distress • Respiratory depression secondary to narcotics • Low birth weight • Seizures • Hypoglycemia • Diarrhea • Jaundice • Fever • Hypothermia • Birth injuries • Cardiac conditions
54.11	Discuss post arrest management of the neonate.
54.12	Discuss vascular access cannulation techniques for a newborn including umbilical vein/artery access.
55.0	**Pediatrics:** Demonstrate a complex depth, comprehensive breadth of knowledge of the management of the pediatric patient within the scope of practice of the paramedic. The student will be able to:
55.01	Discuss key anatomical, physiological, and developmental characteristics of infants and children and their implications.
55.02	Review and demonstrate techniques for successful assessment and treatment of infants and children.
55.03	Review airway and ventilatory considerations and procedures for pediatric patients.
55.04	Discuss the indications and methods for gastric decompression for infants and children.
55.05	Discuss the pathophysiology, signs and symptoms, assessment and management of the following, including but not limited to: • Altered level of consciousness • Trauma • Hypo-profusion • Respiratory distress/failure • Cardiac dysrhythmia • Neurological emergency • Abuse/neglect • SUIDS • FABO • Respiratory emergencies • Congenital heart disease • Hydrocephalus/VP shunts

	55.06 Discuss the appropriate procedure and equipment for vascular and intraosseous access.
	55.07 Review basic cardiac life support (CPR) guidelines for infants and children.
	55.08 Integrate advanced life support skills with basic cardiac life support for infants and children.
	55.09 Discuss the indications, dosage, route of administration and special considerations for medication administration in infants and children.
	55.10 Describe Sudden Unexplained Infant Death Syndrome (SUIDS), current theories, assessment and management, and the immediate needs of the family.
	55.11 Discuss the parent/caregiver responses to the death of an infant or child.
	55.12 Discuss and demonstrate the use of a length-based resuscitation tape and other methods for determining equipment sizes, drug doses, and other pertinent information for a pediatric patient.
	55.13 Discuss proper placement of a gastric tube in infants and children.
	55.14 Review appropriate routes and techniques for medication administration.
	55.15 Demonstrate appropriate parent/caregiver interviewing techniques for infant and child death situations.
56.0	**Geriatrics:** Demonstrate a complex depth, comprehensive breadth of knowledge of the management of the geriatric patient within the scope of practice of the paramedic. The student will be able to:
	56.01 Review and discuss the term geriatrics
	56.02 Review the anatomy, physiology, and pathophysiology of the geriatric patient.
	56.03 Discuss common emotional and psychological concerns and conditions of the geriatric patient.
	56.04 Discuss the importance of fall prevention with the geriatric patient.
	56.05 Describe principles that should be employed when assessing and communicating with the geriatric patient.
	56.06 Describe the common causes, assessment and management of the geriatric patient with a medical, trauma, or psychosocial complaint.
	56.07 Discuss the impact of polypharmacy and medication non-compliance on patient assessment and management.
	56.08 Discuss medication issues of the elderly including polypharmacy, dosing errors and increased drug sensitivity and toxicology.
57.0	**Patients with Special Challenges:** Demonstrate a complex depth, comprehensive breadth of knowledge of management of the patient with special challenges within the scope of practice of the paramedic, patients of all ages. The student will be able to:
	57.01 Discuss the special considerations required when providing emergency care to patients with: • Abuse/neglect of vulnerable populations • Homelessness

	• Poverty • Bariatrics • Tech dependent • Technology dependent (vagal nerve stimulators, CSF diversion devices or shunts, VAD, pacemakers, gastric tubes and others to be locally determined) • Hospice/terminally ill • Tracheostomy • Home care • Sensory deficit/loss • Developmental disability • Autism Spectrum Disorder • Orthotics/prosthetics
57.02	Discuss special considerations regarding common medical devices used in the home care of patients with special challenges including: • Respiratory devices • Cardiac devices • Gastro-urinary devices • Central & peripheral IV catheters
57.03	Describe home care and the types of patients it serves and the services it encompasses.
57.04	Describe the characteristics associated with the profile of the typical abuser of: • Domestic abuser • Elder abuser • Child abuser
57.05	Discuss the role of the Paramedic as a patient advocate for vulnerable populations.
57.06	Differentiate between hospice/palliative care and curative care.
57.07	Describe paraplegia/quadriplegia.
57.08	Describe the various etiologies of mental illness.
57.09	Recognize the presenting signs of the following: • Autism spectrum • Developmental disability • Down’s syndrome
57.10	Describe the following diseases/illnesses and identify each of their possible presenting signs, including but not limited to: • Arthritis • Cancer • Cerebral palsy

	• Cystic fibrosis • Multiple sclerosis • Muscular dystrophy • Myasthenia gravis • Poliomyelitis • Spina bifida, • Patients with a previous head injury • Mental illness
	57.11 Review hospice care, comfort care and DNR/DNAR as they relate to local practice, law and policy.
	57.12 Describe the access and discuss indwelling catheters, implanted central IV ports and central line monitoring.
	57.13 Describe complications of assessing each of the airway, vascular access, and GI/GU devices.
	57.14 Identify and describe the failure of wound drains.
	57.15 Review the rights of the terminally ill.
	57.16 Demonstrate proper tracheotomy care.
	57.17 Demonstrate the insertion of a new inner cannula and/or the use of an endotracheal tube to temporarily maintain an airway in a tracheostomy patient.
58.0	**Principles of Safely Operating a Ground Ambulance:** Demonstrate a simple depth, foundational breadth of knowledge of risks and responsibilities of transport. The student will be able to:
	58.01 Review the EMT standards and benchmarks for the Principles of Safely Operating a Ground Ambulance.
	58.02 Risks and responsibilities of emergency response and radio communications.
	58.03 Risks and responsibilities of operating emergency vehicles
	58.04 Pediatric transport considerations
	58.05 Risks and responsibilities of transport
59.0	**Incident Management:** Demonstrate a complex depth, comprehensive breadth of knowledge of establishing and working within the incident management system. The student will be able to:
	59.01 Review the EMT standards and benchmarks for Incident Management and apply a complex depth and comprehensive breadth of establishing and working within the incident management system.
60.0	**Multiple Casualty Incidents:** Demonstrate a simple depth, foundational breadth of knowledge of responding to an emergency during a multiple casualty incident. The student will be able to:
	60.01 Review the EMT standards and benchmarks for Multiple Casualty Incidents.

	60.02 Establish and work within the incident management system.
	60.03 Understand the principles of Crew Resource Management
61.0	**Air Medical:** Demonstrate a complex depth, comprehensive breadth of knowledge of air medical transport risks, needs and advantages. The student will be able to:
	61.01 Describe the advantages and disadvantages of air medical transport.
	61.02 Safe air medical operations
	61.03 Identify appropriate reasons for the use of air medical for emergency patient transport.
	61.04 Describe the risks involved with the use of air medical transport.
	61.05 Criteria for utilizing air medical response
	61.06 Demonstrate the actions needed to ensure effective and safe ground operations involving air medical response.
	61.07 Demonstrate appropriate communication of information needed for safe and effective interaction between the air medical crew and ground personnel.
	61.08 Medical risks/needs/advantages
62.0	**Vehicle Extrication:** Demonstrate a simple depth, simple breadth of knowledge for safe vehicle extrication and use of simple hand tools. The student will be able to:
	62.01 Review the EMT standards and benchmarks for Vehicle Extrication.
	62.02 Safety principles of rescue operations
63.0	**Hazardous Materials Awareness:** Demonstrate a simple depth, simple breadth of knowledge of risks and responsibilities of operating in a cold zone at a hazardous material or other special incident. The student will be able to:
	63.01 Review the EMT standards and benchmarks for Hazardous Materials Awareness.
	63.02 Risks and responsibilities of operating on the scene of a hazardous materials incident
64.0	**Mass Casualty Incidents due to Terrorism and Disasters:** Demonstrate a simple depth, simple breadth of knowledge of risks and responsibilities of operating on the scene of a natural or man- made disaster. The student will be able to:
	64.01 Review the EMT standards and benchmarks for Mass Casualty Incidents.
	64.02 Risks and responsibilities of operating on the scene of a natural or man-made disaster.
	64.03 Operational goals.
	64.04 Field triage.

64.05 Destination determination.
64.06 Treatment principles.

Florida Department of Education
Student Performance Standards

Program Title: **Paramedic - ATD**
ATD CIP Number: **0351090417**

When this program is offered at the college level, the following standards and benchmarks apply:

The Paramedic standards and benchmarks in this framework include all of the content, knowledge and skills at the EMT level in addition to the Paramedic objectives. For those standards that state "Review EMT standards and benchmarks", please refer to the EMT curriculum framework for specific objectives.

01.0	**EMS Systems:** Demonstrate a fundamental depth, foundational breadth of knowledge of the History of EMS and a complex depth, comprehensive breadth of knowledge of EMS Systems. The student will be able to:	
	01.01	Define terms, including but not limited to: EMS systems, licensure, registration, profession, professionalism, health care professional, ethics, peer review, medical direction, and protocols.
	01.02	Describe the attributes of a paramedic as a health care professional.
	01.03	Explain paramedic licensure/ certification, recertification, and reciprocity requirements in Florida.
	01.04	Explain the importance of maintaining one's paramedic license/certification.
	01.05	Describe the benefits of paramedic continuing education.
	01.06	Discuss the role of national associations and of a national certification agency.
	01.07	Discuss Chapter 401, Florida Statutes (F.S.), and Chapter 64-E, Florida Administrative Code (F.A.C.).
	01.08	Discuss the roles of various EMS standard setting agencies.
	01.09	Identify the standards (components) of an EMS System as defined by the National Highway Traffic Safety Administration.
	01.10	Describe and demonstrate professional behaviors in the following areas: integrity, empathy, self-motivation, appearance and personal hygiene, self-confidence, communications, time management, teamwork and diplomacy, respect, patient advocacy, and careful delivery of service.
	01.11	Describe the role of the EMS physician in providing medical direction.
	01.12	Discuss examples of local protocols.
	01.13	Describe the relationship between a physician on the scene, the paramedic on the scene, and the EMS physician providing on-line medical direction.
	01.14	Describe the role of the paramedic relative to the safety of the crew, the patient, and bystanders.

	01.15 Assess personal practices relative to the responsibility for personal safety, the safety of the crew, the patient, and bystanders.
	01.16 Advocate the need for injury prevention.
	01.17 Discuss the diverse types of EMS services and differences in their provision of care.
02.0	**Research:** Demonstrate a fundamental depth, foundational breath of knowledge of research principles to interpret literature and advocate evidence-based practice. The student will be able to:
	02.01 Interpret results and reach conclusions.
	02.02 Discuss the importance of evidenced based medicine and medical research and its role in refining EMS practices.
03.0	**Workforce Safety and Wellness:** Demonstrate a complex depth, comprehensive breadth of knowledge of workforce safety and wellness. The student will be able to:
	03.01 Discuss the concept of wellness and its benefits.
	03.02 Discuss how cardiovascular endurance, muscle strength, and flexibility contribute to physical fitness.
	03.03 Describe the impact of shift work on circadian rhythms.
	03.04 Discuss the role of risk assessments and warning signs in cancer and cardiovascular disease.
	03.05 Differentiate between proper from improper body mechanics for lifting and moving patients in emergency and non-emergency situations.
	03.06 Describe the problems that a paramedic might encounter in a hostile situation and the techniques used to manage the situation.
	03.07 Describe the equipment available for self-protection when confronted with a variety of adverse situations.
	03.08 Describe the three phases and factors that trigger the stress response.
	03.09 Differentiate between normal/ healthy and detrimental reactions to anxiety and stress.
	03.10 Identify and describe the defense mechanisms and management techniques and resources commonly used to deal with stress.
	03.11 Describe the components of critical incident stress management (CISM).
	03.12 Describe the needs of the paramedic when dealing with death and dying.
	03.13 Discuss the importance of standard precautions and body substance isolation practices.
	03.14 Discuss the need to treat each patient as an individual, with respect and dignity.
	03.15 Discuss the need to respect the emotional needs of dying patients and their families.

	03.16 Discuss the paramedics' role in performing community risk assessment.
04.0	**Documentation:** Demonstrate a complex depth, comprehensive breadth of knowledge of the principles of medical documentation and report writing. The student will be able to:
	04.01 Identify the general principles regarding the importance of EMS documentation and ways in which documents are used.
	04.02 Demonstrate proper use of medical terminology.
	04.03 Record pertinent administrative information to a given standard.
	04.04 Analyze the documentation for accuracy and completeness, including spelling.
	04.05 Describe the differences between subjective and objective elements of documentation.
	04.06 Describe the potential consequences of illegible, incomplete, or inaccurate documentation.
	04.07 Describe the special considerations concerning patient refusal of transport.
	04.08 Explain how to properly record direct patient or bystander comments.
	04.09 Describe the special considerations concerning mass casualty incident documentation.
	04.10 Identify and record the pertinent, reportable clinical data of each patient interaction.
	04.11 Note and record pertinent negative clinical findings.
	04.12 Demonstrate proper completion of an EMS PCR (patient care record).
05.0	**EMS Communication:** Demonstrate a complex depth, comprehensive breadth of knowledge of EMS communication system. The student will be able to:
	05.01 Identify the role of verbal, written, and electronic communications in the provision of EMS.
	05.02 Describe the phases of communications necessary for an emergency response and transport.
	05.03 Discuss the importance of proper terminology when communicating during an emergency.
	05.04 Discuss factors that impede or enhance effective verbal and written communications.
	05.05 Discuss the legal implications of written communications.
	05.06 Identify the components of the local EMS communications system and describe their function and use.
	05.07 Identify and differentiate among the following communications systems: simplex, multiplex, duplex, trunked, digital communications, and cellular telephone.

	05.08 Describe the functions and responsibilities of the Federal Communications Commission.
	05.09 Describe how emergency medical dispatch (EMD) functions as an integral part of the EMS system.
	05.10 List appropriate information to be gathered by the telecommunicator.
	05.11 Demonstrate an organized and concise radio transmission
	05.12 Demonstrate an organized and concise patient report upon transfer of care.
06.0	**Therapeutic Communication:** Demonstrate a complex depth, comprehensive breadth of knowledge of the therapeutic communication principles. The student will be able to:
	06.01 Identify internal and external factors that affect a patient/ bystander interview conducted by a paramedic.
	06.02 Review the strategies for developing patient rapport.
	06.03 Summarize the methods to assess mental status based on interview techniques.
	06.04 Discuss the strategies for interviewing difficult patients.
	06.05 Summarize developmental considerations, patients of all ages that influence patient interviewing.
	06.06 Review unique interviewing techniques necessary to employ with patients who have special needs.
	06.07 Discuss interviewing considerations used by paramedics in cross-cultural communications.
07.0	**Medical/Legal and Ethics:** Demonstrate a complex depth, comprehensive breadth of knowledge of medical legal and ethical concepts related to EMS. The student will be able to:
	07.01 Differentiate between legal and ethical responsibilities.
	07.02 Discuss State of Florida and Federal special reporting situations including: • Abuse • Sexual assault • Gunshot and knife wounds • Communicable disease • Animal bites
	07.03 Review terms, including but not limited to, the following: abandonment, battery, breach of duty, consent (expressed, implied, informed, voluntary), DNR orders, duty to act, emancipated minor, false imprisonment, liability, libel, negligence, proximate cause, scope of practice, slander, and tort.
	07.04 Differentiate between the scope of practice and the standard of care for paramedic practice.
	07.05 Discuss the concept of medical direction, including off-line medical direction and on-line medical direction, and its relationship to the standard of care of a paramedic.

	07.06 Review the four elements that must be present in order to prove negligence.
	07.07 Review the legal concept and limitations of immunity, including Good Samaritan statutes and governmental immunity, as it applies to the paramedic.
	07.08 Review the importance and necessity of patient confidentiality and the standards for maintaining patient confidentiality that apply to the paramedic.
	07.09 Review consent to include expressed, informed, implied, and involuntary.
	07.10 Demonstrate appropriate patient management techniques in a refusal of care situation.
	07.11 Discuss the issues of abandonment, negligence, false imprisonment, and battery and their implications to the paramedic.
	07.12 Describe the actions that the paramedic should take to preserve evidence at a crime or accident scene.
	07.13 Describe the importance of providing accurate communication (oral and written) in substantiating an incident.
	07.14 Describe the criteria necessary to honor an advance directive in Florida.
08.0	**Anatomy and Physiology:** Integrate a complex depth, comprehensive breadth of knowledge of anatomy and physiology of all human systems. The student will be able to:
	08.01 Review the EMT standards and benchmarks for the anatomy & physiology.
	08.02 Demonstrate comprehensive knowledge of anatomy and physiology as it applies to paramedic practice.
09.0	**Medical Terminology:** Integrate a comprehensive knowledge in the use of medical terminology and abbreviations into written and oral communication with health care professionals. The student will be able to:
	09.01 Review the EMT standards and benchmarks for medical terminology.
	09.02 Demonstrate a comprehensive knowledge of medical terminology as it applies to paramedic practice.
10.0	**Pathophysiology:** Demonstrate a complex knowledge of pathophysiology of major systems. The student will be able to:
	10.01 Describe the factors that precipitate disease in the human body including familial diseases and risk factors.
	10.02 Describe environmental risk factors.
	10.03 Define and discuss the pathogenesis, signs, and symptoms of distributive, obstructive, neurogenic, anaphylactic, and septic shock.
	10.04 Discuss multiple organ dysfunction syndrome (MODS).
	10.05 Describe alterations in cells and tissues including cellular adaptation, cellular injury, manifestation of cellular injury, and cellular death/necrosis.
	10.06 Describe genetics and familial diseases and the role they play in pathophysiology.

	10.07 Describe the self–defense mechanisms of inflammation and immune responses and their relationships to pathophysiology.
11.0	**Life Span Development:** Integrate the knowledge of the physiological, psychological, and sociological changes throughout human development. The student will be able to:
	11.01 Compare, contrast, and analyze the physiological and psychosocial characteristics of patients of all ages.
12.0	**Public Health:** Demonstrate a fundamental knowledge of principles of public health. The student will be able to:
	12.01 Review the EMT standards and benchmarks for the public health.
	12.02 Apply a fundamental knowledge of the principles of public health, epidemiology, health promotion, and illness and injury prevention.
13.0	**Principles of Pharmacology:** Demonstrate a complex depth, comprehensive breadth of knowledge in the principles of pharmacology. The student will be able to:
	13.01 Differentiate among the chemical, generic (nonproprietary), and trade (proprietary) names of a drug.
	13.02 List the four main sources of drug products.
	13.03 Describe how drugs are classified.
	13.04 List legislative acts controlling drug use and abuse in the United States.
	13.05 Differentiate among Schedule I, II, III, IV, and V substances.
	13.06 Use reference materials to research medications.
	13.07 Discuss standardization of drugs.
	13.08 Discuss investigational drugs, including the Food and Drug Administration (FDA) approval process and the FDA classifications for newly approved drugs.
	13.09 Discuss the paramedic's responsibilities and scope of practice pertinent to the administration of medications.
	13.10 List and describe available drug forms.
	13.11 List and differentiate all methods and routes of medication administration covered in the current National EMS Scope of Practice Model.

	13.12 Describe the process of: • Pharmacokinetics • Pharmacodynamics • Theories of drug action • Drug-response relationship • Factors altering drug responses • Predictable drug responses • Iatrogenic drug responses • Unpredictable adverse drug responses
	13.13 Discuss the prevention, recognition and management of adverse medication reactions.
	13.14 Select the optimal medication and method of medication administration for patients with a particular clinical condition or situation.
14.0	**Medication Administration:** Demonstrate a complex depth, comprehensive breadth of knowledge of medication administration within the scope of practice of the paramedic. The student will be able to:
	14.01 Review the specific anatomy and physiology pertinent to medication administration.
	14.02 Discuss the paramedic's responsibilities and scope of practice pertinent to the administration of medications.
	14.03 Review mathematical principles and demonstrate equations necessary for performing drug calculations.
	14.04 Describe the indications, contraindications, procedure, equipment and risks associated with peripheral intravenous or external jugular access.
	14.05 Describe the indications, equipment needed, technique used, precautions, and general principles of intraosseous needle placement and infusion.
	14.06 Describe complications that can occur as a result of IV therapy.
	14.07 Review the "six rights" of drug administration and correlate these with the principles of medication administration.
	14.08 Describe the use of standard precautions and body substance isolation (BSI) procedures when administering a medication.
	14.09 Prepare medications for administration from a variety of types of packaging, including vials, non-constituted vials, ampules, prefilled syringes, and packaging for intravenous solutions.
	14.10 Describe the role of medical direction in medication administration and describe the difference between direct orders (online) and standing orders (off-line).
	14.11 Describe the indications, equipment needed, techniques used, precautions, and general principles of administering medications by the following routes: • inhalation route • gastric tube • rectal route
	14.12 Differentiate among the different percutaneous routes of medication administration.

	14.13 Describe the purpose, equipment needed, techniques used, complications, and general principles for obtaining a blood sample.
	14.14 Obtain venous and capillary blood for testing and discuss blood chemistry and normal values.
	14.15 Demonstrate principles of medical asepsis in the administration of medications.
	14.16 Demonstrate the procedure for disposal of contaminated items and supplies.
	14.17 Demonstrate cannulation of peripheral, intravenous and/or external jugular veins.
	14.18 Demonstrate intraosseous access.
	14.19 Demonstrate administration of medications by the following routes: • Oral • Sublingual • Buccal • Auto-injector • Inhalation route • Intranasal route • Subcutaneous route • Intramuscular route • Intravenous route • Intraosseous route
15.0	**Emergency Medications:** Demonstrate a complex depth, comprehensive breadth of knowledge of emergency medications within the scope of practice for the paramedic. The student will be able to:
	15.01 Discuss medications used by the paramedic, including indications, contraindications, dosages, adverse reactions, side effects, and interactions for the following: • Airway management • Respiratory • Cardiovascular • Neurologic conditions • Gastrointestinal • Miscellaneous medications
16.0	**Airway Management:** Demonstrate a complex depth, comprehensive breadth of knowledge of airway management within the scope of practice of the paramedic, patients of all ages. The student will be able to:
	16.01 Explain the primary objective of airway maintenance.
	16.02 Explain the differences in airway anatomy.
	16.03 Define, identify and describe a tracheostomy, laryngectomy, stoma, and tracheostomy tube.

	16.04 Describe the special considerations in airway management and ventilation for the pediatric patient.
	16.05 Describe the indications, contraindications, advantages, disadvantages, complications and equipment for rapid sequence intubation with neuromuscular blockade.
	16.06 Identify neuromuscular blocking drugs and other agents used in rapid sequence intubation.
	16.07 Describe the indications, contraindications, advantages, disadvantages, complications and equipment for sedation during intubation.
	16.08 Describe the indications, contraindications, advantages, disadvantages and complications for performing cricothyrotomy.
	16.09 Demonstrate the procedure for percutaneous cricothyrotomy.
	16.10 Review the function of the structures located in the upper and lower airway.
	16.11 Demonstrate effective techniques of advanced airway management of the following: • Orotracheal, • Nasotracheal, • Subglottic, • Supraglottic, • Digital intubation
	16.12 Describe and demonstrate methods of assessment for confirming correct placement of any airway device.
	16.13 Describe the indications, contraindications, advantages, disadvantages, complications, equipment and technique for extubation.
17.0	**Respiration:** Demonstrate a complex depth, comprehensive breadth of knowledge of respiration within the scope of practice of the paramedic, patients of all ages. The student will be able to:
	17.01 List the concentration of gases that comprise atmospheric air.
	17.02 Describe the measurement of oxygen in the blood.
	17.03 Describe the measurement of carbon dioxide in the blood.
	17.04 Describe peak expiratory flow.
	17.05 Describe factors that cause decreased oxygen concentrations in the blood.
	17.06 Describe the factors that increase and decrease carbon dioxide production in the body.
	17.07 Define pulsus paradoxus.
	17.08 Describe the indications, contraindications, advantages, disadvantages, complications, liter flow range, and concentration of delivered oxygen for supplemental oxygen delivery devices.

	17.09 Review the physiology of ventilation and respiration.
18.0	**Ventilation:** Demonstrate a complex breadth, comprehensive breadth of knowledge of ventilatory assessment and management, patients of all ages. The student will be able to:
	18.01 Perform and interpret pulse oximetry and capnography.
	18.02 Describe indications, contraindications, advantages, disadvantages, complications, and technique for ventilating a patient with an automatic transport ventilator (ATV), BIPAP/CPAP, AND PEEP devices.
19.0	**Scene Size-Up:** Demonstrate a complex depth, comprehensive breadth of knowledge of scene management. The student will be able to:
	19.01 Describe common hazards found at the scene of a trauma and a medical patient.
	19.02 Discuss common mechanisms of injury/ nature of illness.
	19.03 Explain the rationale for crew members to evaluate scene safety prior to entering.
	19.04 Demonstrate the scene-size-up.
20.0	**Primary Assessment:** Demonstrate a complex depth, comprehensive breadth of knowledge of the primary assessment for all patient situations. The student will be able to:
	20.01 Summarize the elements of a general impression of the patient.
	20.02 Explain the reason for performing a primary assessment.
	20.03 Discuss and demonstrate methods of assessing levels of responsiveness using AVPU.
	20.04 Discuss and demonstrate methods of assessing the airway. patients of all ages.
	20.05 Describe and demonstrate methods used for assessing if a patient is breathing, patients of all ages.
	20.06 Differentiate between a patient with adequate and inadequate breathing.
	20.07 Describe and demonstrate the methods used to obtain a pulse, patients of all ages.
	20.08 Discuss and demonstrate assessing the patient for external bleeding.
	20.09 Describe and demonstrate the assessment and interruption of skin color, temperature, moisture, and capillary refill, patients of all ages
	20.10 Explain the reasons for prioritizing a patient for care and transport.
	20.11 Describe when it is appropriate to expose the patient completely.
	20.12 Differentiate between critical life-threatening, potentially life-threatening, and non-life-threatening patient presentations.

21.0	**History Taking:** Demonstrate a complex depth, comprehensive breath of knowledge of the components of history taking. The student will be able to:
	21.01 Determine and investigate the chief complaint.
	21.02 Describe the components of the patient history.
	21.03 Explain the importance of obtaining a SAMPLE and OPQRST history.
	21.04 Acknowledge the feelings patients experience during assessment.
	21.05 Discuss the value of obtaining a family and social history.
	21.06 Describe examples of different techniques the paramedic may use to obtain information from patients, family, or bystanders during the history taking process.
22.0	**Secondary Assessment:** Demonstrate a complex depth, comprehensive breadth of knowledge of techniques used for secondary assessment patients of all ages. The student will be able to:
	22.01 Review EMT standards and benchmarks for secondary assessment.
	22.02 Describe the techniques of inspection, palpation, percussion, and auscultation.
	22.03 Discuss the limitations of conducting a physical exam in the out-of-hospital environment.
	22.04 Demonstrate the examination of the patient including all major body systems and anatomical regions.
	22.05 Distinguish the importance of abnormal assessment findings in all the major body systems and anatomical regions.
	22.06 Describe the evaluation of patient's perfusion status based on findings in the initial assessment.
	22.07 State the reasons for performing a rapid trauma assessment.
	22.08 Discuss the reason for performing a focused history and physical exam.
	22.09 Discuss appropriate gender and cultural considerations regarding assessment.
	22.10 Discuss medical identification devices/ systems.
23.0	**Monitoring Devices:** Demonstrate a fundamental depth, foundational breadth of knowledge of monitoring devices within the scope of practice of the paramedic. The student will be able to:

	23.01 Describe the purpose, indications, procedure, normal findings, and limitations of the following patient monitoring technologies, including but not limited to: • Continuous ECG monitoring • 12-Lead ECG • Capnography (wave form) • Co-oximetry • Methemoglobin monitoring • Total hemoglobin • Basic blood chemistry • Ultrasound • Other devices identified at the EMT level
	23.02 Demonstrate the use of the following patient monitoring technologies, including but not limited to: • Continuous ECG monitoring • 12-Lead ECG • Capnography (wave form) • Other devices identified at the EMT level
24.0	**Reassessment:** Demonstrate a complex depth, comprehensive breadth of knowledge of how and when to perform a reassessment for all patient situations. The student will be able to:
	24.01 Describe the components of reassessment and demonstrate the skills involved.
	24.02 Discuss the reasons for repeating the primary assessment as part of the reassessment.
	24.03 Explain trending assessment components and its value to other health professionals who assume care of the patient.
	24.04 Demonstrate reassessment of patients of all ages
25.0	**Medical Overview:** Demonstrate a complex depth, comprehensive breadth of knowledge of pathophysiology, assessment, and management of medical complaints. The student will be able to:
	25.01 Identify factors that complicate patient assessment including: • Scene safety • Environmental factors • Chief complaint • Paramedic preconceptions • Distracting injuries • Tunnel vision • Patient cooperation • Paramedic attitude
	25.02 Discuss forming a field impression and utilizing available information to determine a different diagnosis.

26.0	**Neurology:** Demonstrate a complex depth, comprehensive breadth of knowledge of neurologic disorders/emergencies, patients of all ages. The student will be able to:
	26.01 Identify the risk factors associated with nervous system dysfunction.
	26.02 Review the anatomy and physiology of the organs and structures related to nervous system.
	26.03 Discuss the pathophysiology, signs and symptoms and demonstrate the assessment and management of patients with the following neurological conditions, including but not limited to: • Coma • Altered mental status • Seizures • Syncope • Transient ischemic attack • Stroke and intracranial hemorrhage • Degenerative neurologic diseases • Chronic alcoholism • Back disorders
	26.04 Describe and differentiate the major types of seizures.
	26.05 Describe the types of stroke.
	26.06 Describe the significance of the prevalence of neurologic disorders in the United States.
	26.07 Discuss screen tools for assessment of stroke and large vessel occlusion.
	26.08 Demonstrate the use of stroke screening tools and appropriate decision-making regarding transport destination for a stroke patient.
27.0	**Abdominal and Gastrointestinal Disorders:** Demonstrate a complex depth, comprehensive breadth of knowledge of abdominal and gastrointestinal disorders/emergencies, patients of all ages. The student will be able to:
	27.01 Review the anatomy and physiology of the organs and structures related to gastrointestinal diseases.
	27.02 Differentiate between hemorrhagic and non-hemorrhagic causes of abdominal pain.
	27.03 Describe the technique for performing a comprehensive physical examination on a patient complaining of abdominal pain.

	27.04 Discuss the pathophysiology, signs, and symptoms, and demonstrate the assessment, and management of patients with the following abdominal and gastrointestinal disorders, including but not limited to: • Both upper and lower gastrointestinal bleeding • Acute gastroenteritis. • Colitis. • Diverticulitis. • Appendicitis. • Peptic ulcer disease. • Bowel obstruction. • Crohn's disease. • Pancreatitis. • Esophageal varices. • Hemorrhoids. • Cholecystitis. • Acute hepatitis.
	27.05 Identify patients at risk for gastrointestinal emergencies.
	27.06 Demonstrate how to auscultate the abdomen to assess for diminished, absent or abnormal bowel sounds.
28.0	**Immunology:** Demonstrate a complex depth, comprehensive breadth of knowledge of immunology disorders/emergencies patients of all ages. The student will be able to:
	28.01 Define and differentiate: • Allergic reaction. • Anaphylaxis • Antigens • Antibodies • Anaphylactoid reaction
	28.02 Review the anatomy and physiology of the organs and structures related to anaphylaxis.
	28.03 Describe the prevention of anaphylaxis and appropriate patient education.
	28.04 Review the pathophysiology of allergy and anaphylaxis.
	28.05 Describe the common methods of entry of allergens into the body.
	28.06 Review common antigens most frequently associated with anaphylaxis.
	28.07 Differentiate among the various treatment and pharmacological interventions used in the management of anaphylaxis and allergic reaction.
29.0	**Infectious Diseases:** Demonstrate a complex depth, comprehensive breadth of knowledge of assessment and management of a patient who may have an infectious disease, patients of all ages. The student will be able to:

	29.01 Review EMT standards and benchmarks for infectious disease.
	29.02 Review the specific anatomy and physiology pertinent to infectious and communicable diseases.
	29.03 Describe the steps of an infectious process.
	29.04 Describe and differentiate infectious agents, including bacteria, viruses, fungi, protozoans, and helminths (worms).
	29.05 Review characteristics of the immune system.
	29.06 Perform an assessment of a patient with an infectious/communicable disease.
	29.07 Effectively and safely manage a patient with an infectious/communicable disease.
	29.08 Review public health principles related to infectious disease.
	29.09 Review the roles of local, state, and federal agencies involved in infectious disease surveillance and outbreaks.
	29.10 Describe the interactions of the agent, host, and environment as determining factors in disease transmission.
	29.11 Describes the EMS professional's responsibilities as well as their rights under the Ryan White Act.
	29.12 Discuss the pathophysiology, signs, symptoms, assessment, and management and risk factors of significant health concerns.
	29.13 Discuss the characteristics of, and organisms associated with, febrile and afebrile respiratory disease.
	29.14 Describe the EMS provider's role in patient education and preventing disease transmission.
	29.15 Review the pathophysiology, risk factors, assessment, and prehospital management of sepsis/systemic inflammatory response syndrome (SIRS).
30.0	**Endocrine Disorders:** Demonstrate a complex depth, comprehensive breadth of knowledge in endocrine disorders/emergencies, patients of all ages. The student will be able to:
	30.01 Identify the risk factors related to disorders of the endocrine system.
	30.02 Review the anatomy and physiology of organs and structures related to endocrinologic diseases.

	30.03 Discuss the pathophysiology, signs and symptoms and demonstrate the assessment, and management of patients with the following endocrinologic emergencies: • Hypoglycemia • Hyperglycemia • Diabetic ketoacidosis • Cushing's syndrome • Adrenal insufficiency • Pituitary disorders • Thyroid disorders
31.0	**Psychiatric:** Demonstrate a complex depth, comprehensive breadth of knowledge regarding the assessment and management of psychiatric disorders/emergencies, patients of all ages. The student will be able to:
	31.01 Differentiate among behavior, psychiatric disorders, and behavioral emergencies.
	31.02 Discuss the pathophysiology of common psychiatric disorders and behavioral emergencies.
	31.03 Discuss the general factors that may cause an alteration in a patient's behavior.
	31.04 Discuss the factors/signs or symptoms of various psychiatric emergencies to include suicide.
	31.05 Manage a behavioral emergency scenario applying knowledge of medical/legal Florida Statutes.
	31.06 Describe and demonstrate the assessment and management of the patient experiencing a behavioral or psychiatric emergency.
	31.07 Describe the biological, psychosocial, and sociocultural influences on psychiatric disorders.
	31.08 Describe the special considerations for the safety of the EMS provider, and EMS crew, the patient and bystanders when dealing with behavioral and psychiatric emergencies.
	31.09 Explain the importance of provider behavior and communication in the care of a patient with a behavioral emergency.
	31.10 Describe and demonstrate methods of restraint that may be used in the management of a patient with a behavioral emergency and possible legal implication.
	31.11 List the risk factors (including behaviors) for suicide.
32.0	**Cardiovascular:** Demonstrate a complex depth, comprehensive breadth of knowledge of cardiovascular disorders/emergencies, patients of all ages. The student will be able to:
	32.01 Describe the epidemiology, incidence, morbidity and mortality of cardiovascular disease.
	32.02 Identify the risk factors of coronary artery disease.
	32.03 Review the anatomy and physiology of the heart and circulatory system.
	32.04 Discuss the electrophysiology of the heart.

32.05	Discuss and demonstrate ECG monitoring, 12 Lead placement, acquisition, and interpretation.
32.06	Define and give examples of positive and negative inotropes, chronotropes and dromotropes.
32.07	Identify the normal characteristics of the point of maximal impulse (PMI).
32.08	Discuss the normal and abnormal heart sounds and how they relate to hemodynamic events in the cardiac cycle.
32.09	Describe a systematic approach to the analysis and interpretation of cardiac dysrhythmias.
32.10	Describe the conditions of pulseless electrical activity.
32.11	Compare and contrast electrotherapy to include pacing.
32.12	Discuss the pathophysiology, signs and symptoms and demonstrate the assessment, and management of patients following conditions including the development of a treatment plan, including but not limited to: • Angina • Myocardial infarction STEMI/Non-STEMI • Congestive heart failure • Cardiac tamponade • Cardiogenic shock • Hypertension and acute hypertensive states • Cardiac arrest • Vascular disorders • Hypertrophic cardiomyopathies • Infectious diseases of the heart • Congenital abnormalities
32.13	List other clinical conditions that may mimic signs and symptoms of coronary artery disease and angina pectoris.
32.14	Compare fibrinolysis from percutaneous intervention as reperfusion techniques used in patients with AMI or suspected AMI and describe the "window of opportunity" as it pertains to reperfusion of a myocardial infarction.
32.15	List the characteristics of a patient eligible for thrombolytic therapy.
32.16	Define the term acute pulmonary edema and describe its relationship to left ventricular failure.
32.17	Discuss preload, afterload and left ventricular end-diastolic pressure and relate each to the pathophysiology of heart failure.
32.18	Identify non-cardiac causes of cardiac arrest.
32.19	Discuss the components of post resuscitation care including how to determine the return of spontaneous circulation (ROSC).
32.20	Identify circumstances and situations where resuscitation efforts would not be initiated or would be terminated.

	32.21 Demonstrate satisfactory performance of psychomotor skills of basic and advanced life support techniques according to the current American Heart Association guidelines or its equivalent, including: • Cardiopulmonary resuscitation • Defibrillation • Synchronized cardioversion • Transcutaneous pacing
33.0	**Toxicology:** Demonstrate a complex depth, comprehensive breadth of knowledge of the assessment and management of toxicology emergencies, patients of all ages. The student will be able to:
	33.01 Define and differentiate among toxicology, poisoning, and overdose.
	33.02 Describe the pathophysiology and signs and symptoms of the following toxicological emergencies, including but not limited to: • Food poisoning • Carbon monoxide poisoning • Cyanide poisoning • Exposure to acid or alkaline substance • Exposure to hydrocarbons • Methanol ingestion • Isopropanol ingestion • Ethylene glycol ingestion • Exposure to poisonous substances • Drug withdrawal • Alcoholic syndrome • Withdrawal syndrome (including delirium tremens) • Illicit drug use • Medication overdose • Opioid overdose • Organa phosphate overdose
	33.03 Discuss the role of the Poison Control Center with the nationwide contact number 800-222-1222 in the United States.
	33.04 Review various ways that toxins enter the body.
	33.05 Discuss and demonstrate the assessment and management for the patient with a toxicological emergency.
	33.06 Explain the rationale for contacting medical direction early in the prehospital management of a patient with a toxicological emergency.

	33.07 Review the following for Narcan (naloxone): • Generic and trade names • Medication forms • Dose • Administration • Contraindications
34.0	**Respiratory:** Demonstrate a complex depth, comprehensive breadth of knowledge of the assessment and management of respiratory disorders/emergencies, patients of all ages. The student will be able to:
	34.01 Discuss the epidemiology, morbidity, and mortality of respiratory illness in the United States.
	34.02 Review hypoventilation and hyperventilation and outline the conditions with which they are often associated.
	34.03 Review the anatomy, physiology and functions of the respiratory system.
	34.04 Discuss those factors that contribute to the formation of a general impression and degree of respiratory distress.
	34.05 Identify breathing patterns that are associated with respiratory distress and neurologic insults and their correlation with the signs of increased work of breathing.
	34.06 Review between normal and abnormal breath/lung sounds and its physiologic significance.
	34.07 Explain the concepts of hypoxic drive and auto-PEEP as they relate to the COPD patient.

	34.08 Discuss the pathophysiology, signs and symptoms and demonstrate the assessment, and management of patients with the following respiratory conditions, including but not limited to: • Pulmonary infections (upper and lower airway) • Atelectasis • Anatomic or foreign body obstruction • Aspiration • Asthma • Emphysema • Chronic bronchitis • Spontaneous pneumothorax • Pleural effusion • Pulmonary embolism • Cancer • Toxic inhalations • Pulmonary edema • Acute respiratory distress syndrome (ARDS) • Pneumonia • Neoplasms of the lung • Hyperventilation syndrome
35.0	**Hematology:** Demonstrate a complex depth, foundational breadth of knowledge of the assessment, and management of hematology disorders/emergencies, patients of all ages. The student will be able to:
	35.01 Identify the role of heredity in the risk for hematologic disorders.
	35.02 Review the anatomy and physiology of the hematopoietic system.
	35.03 Describe volume and volume-control related to the hematopoietic system.
	35.04 Explain the significance of the hematocrit with respect to red cell size and number.
	35.05 Explain the correlation of the RBC count, hematocrit and hemoglobin values.
	35.06 Recognize medications used to decrease the risk of thrombosis.
	35.07 Identify blood groups.

	35.08 Discuss the pathophysiology, signs and symptoms and demonstrate the assessment, and management of patients with the following conditions, including but not limited to: • Anemia • Leukemia • Lymphomas • Polycythemia • Disseminated intravascular coagulopathy • Hemophilia • Sickle cell disease • Multiple myeloma • Leukopenia/neutropenia • Leukocytosis • Thrombocytosis • Thrombocytopenia • Transfusion complications
36.0	**Genitourinary/Renal:** Demonstrate a complex depth, comprehensive breadth of knowledge of genitourinary and renal emergencies, patients of all ages. The student will be able to:
	36.01 Describe the epidemiology, incidence, morbidity, mortality, and risk factors of urological emergencies.
	36.02 Review the anatomy and physiology of the organs and structures related to urogenital diseases.
	36.03 Discuss referred pain and visceral pain as it relates to urology.
	36.04 Discuss the pathophysiology, signs and symptoms and demonstrate the assessment, and management of patients of the following urologic and renal conditions, including but not limited to: • Acute renal failure • Chronic renal failure • Complications related to hemodialysis and peritoneal dialysis. • Renal calculi • Priapism • Testicular torsion • Urinary tract infection
	36.05 Review fluids, electrolytes, and acid-based disturbances.
37.0	**Gynecology:** Demonstrate a complex depth, comprehensive breadth of knowledge of the assessment findings and the management of gynecology disorders/emergencies, patients of all ages. The student will be able to:
	37.01 Review anatomy and physiology of the female reproductive system.
	37.02 Identify the normal events of the menstrual and ovarian cycle.

	37.03 Discuss the pathophysiology, signs and symptoms and demonstrate the assessment, and management of patients with specific gynecological emergencies, including but not limited to: • Infection (including pelvic inflammatory disease, Bartholin's abscess, and vaginitis/ vulvovaginitis) • Ovarian cyst and ruptured ovarian cyst • Ovarian torsion • Endometriosis • Dysfunctional uterine bleeding • Prolapsed uterus • Vaginal foreign body • Vaginal hemorrhage
	37.04 Describe the importance of maintaining a patient's modesty and privacy while still being able to obtain necessary information.
	37.05 Discuss the need to provide care for a patient of sexual assault, while still preventing destruction of crime scene information.
38.0	**Non-Traumatic Musculoskeletal Disorders:** Demonstrate a fundamental depth, foundation breadth of knowledge of the assessment and management of non-traumatic fractures patients of all ages. The student will be able to:
	38.01 Review the anatomy and physiology of the musculoskeletal system
	38.02 Discuss the pathophysiology, signs and symptoms and demonstrate the assessment and management of patients with musculoskeletal emergencies, including but not limited to: • Osteomyelitis and tumors • Disc disorders, lower back pain (cauda equine syndrome, sprain, and strain.) • Joint abnormalities • Muscle abnormalities • Overuse syndrome • Soft tissue infections
39.0	**Diseases of the Eyes, Ears, Nose, and Throat:** Demonstrate a fundamental depth, foundational breadth of knowledge of the assessment and management of common or major diseases of the eyes, ears, nose and throat, patients of all ages. The student will be able to:
	39.01 Review the anatomy and physiology of the eyes, ears, nose, and throat.

39.02	Discuss the pathophysiology, signs, and symptoms and demonstrate the assessment and management of patients with various eye diseases/injuries, including but not limited to: • Burns of eye and adnexa • Conjunctivitis • Corneal abrasions • Foreign body • Inflammation of the eyelid • Glaucoma • Hyphemia • Iritis • Papilledema • Retinal detachment and defect • Cellulitis of orbit
39.03	Discuss the pathophysiology, signs, and symptoms and demonstrate the assessment and management of patients with various ear diseases/injuries including: • Foreign body • Impacted cerumen • Labyrinthitis • Meniere's disease • Otitis external and media • Perforated tympanic membrane
39.04	Discuss the pathophysiology, signs, and symptoms and demonstrate the assessment and management of patients with various nose diseases/injuries including: • Epistaxis • Foreign body intrusion • Rhinitis • Sinusitis

	39.05 Discuss the pathophysiology, signs and symptoms and demonstrate the assessment and management of patients with oropharynx/throat diseases/injuries including: • Dentalgia and dental abscess • Diseases of oral soft tissue/Ludwig's angina • Foreign body intrusion • Epiglottitis • Laryngitis • Tracheitis • Oral candidiasis • Peritonsillar abscess • Pharyngitis/tonsillitis • Temporomandibular joint disorders
40.0	**Shock and Resuscitation:** Demonstrate the integration of a comprehensive knowledge of causes and pathophysiology into the management of shock and respiratory failure. The student will be able to:
	40.01 Describe the epidemiology, including premorbid and comorbid conditions and prevention strategies, for shock and hemorrhage.
	40.02 Review the anatomy and physiology of the cardiovascular and respiratory systems.
	40.03 Contrast the physiology of blood flow during normal states, peri-arrest, cardiac arrest and shock.
	40.04 Discuss and demonstrate the assessment and management of shock.
	40.05 Review the management of external hemorrhage.
	40.06 Discuss appropriate fluid resuscitation.
	40.07 Review the following for the cardiac arrest victim: • Epidemiology • Pathophysiology • Physiology of blood flow during external chest compressions • Resuscitation success/research
	40.08 Review defibrillation and cardioversion to include manual techniques, automatic and semi-automated devices.

	40.09	Discuss causes, pathophysiology, signs, and symptoms and management of special arrest and peri-arrest conditions, including but not limited to: • Electrolyte disorders • Toxic exposures • Drowning • Hypothermia • Near-Fatal Asthma • Anaphylaxis • Trauma • Pregnancy • Electrical shock and lightning strikes
	40.10	Review post resuscitative care include, temperature regulation, glucose/electrolyte management.
	40.11	Discuss and demonstrate the assessment and management of internal hemorrhage.
	40.12	Review the stages and classifications of hemorrhage.
	40.13	Review the pathophysiology and demonstrate the assessment and management of the different types of shock.
	40.14	Describe the effects of decreased perfusion at the capillary level.
	40.15	Relate pulse pressure changes to perfusion status.
	40.16	Relate orthostatic vital sign changes to perfusion status.
	40.17	Define and differentiate between compensated and decompensated shock for all types of shock.
	40.18	Discuss and differentiate the physiological manifestations of shock patients of all ages.
41.0	**Trauma Overview:**	Demonstrate a complex depth, comprehensive breadth of knowledge of pathophysiology, assessment, and management of the trauma patient, patients of all ages. The student will be able to:
	41.01	Review the pathophysiology of the trauma patient.
	41.02	Review the components of comprehensive trauma systems and levels of trauma centers.
	41.03	Review the considerations for different transportation modes to a trauma center.
	41.04	Discuss the kinematics of blunt and penetrating trauma.
	41.05	Discus and describe significant and non-significant mechanism of injury (MOI) and provide examples of each.
	41.06	Discuss and demonstrate the application of State of Florida's trauma scorecard methodologies as required in Florida Statute and Florida Administrative Code.

	41.07 Review the National Trauma Triage Protocol of Injured Patients.
	41.08 Review forming a field impression and utilizing available information to determine a differential diagnosis.
	41.09 Review the need for rapid intervention transport of the trauma patient.
42.0	**Bleeding:** Demonstrate a complex depth, comprehension breadth of knowledge of pathophysiology, assessment and management of bleeding, patients of all ages. The student will be able to:
	42.01 Review the compensatory mechanism in hemorrhagic shock.
	42.02 Review the administration of medications to assist in the maintenance of homeostasis.
	42.03 Review the maintenance of tissue oxygenation in a bleeding patient.
	42.04 Discuss appropriate fluid resuscitation for the patient in hemorrhagic shock.
	42.05 Review the different methods/modalities of controlling bleeding.
43.0	**Chest Trauma:** Demonstrate a complex depth, comprehensive breadth of knowledge of pathophysiology, assessment, and management of chest trauma patients of all ages. The student will be able to:
	43.01 Review the anatomy and physiology of the organs and structures related to thoracic injuries.

	43.02 Review the pathophysiology, signs and symptoms and mechanism of injury (MOI) of the following injuries, including but not limited to:
	• Myocardial injuries
	  o Pericardial tamponade
	  o Myocardial contusion
	  o Myocardial rupture
	• Vascular injury
	  o Aortic dissection
	  o Pulmonary contusion
	• Hemothorax
	• Pneumothorax
	• Hemopneumothorax
	• Cardiac Tamponade
	• Commotio cordis
	• Tracheobronchial disruption
	• Diaphragmatic rupture and injury
	• Tramatic asphyxia
	• Rib fracture
	• Flail segment
	• Sternal fracture
	• Vascular injuries
	• Impaled objects
	• Evisceration/shock

	43.03 Discuss monitoring of chest tubes.
	43.04 Demonstrate the following techniques of management for thoracic injuries: needle decompression, elective intubation, ECG monitoring. oxygenation, and ventilation
44.0	**Abdominal and Genitourinary Trauma:** Demonstrate a complex depth, comprehensive breadth of knowledge of pathophysiology, assessment, and management of abdominal and genitourinary trauma, patients of all ages. The student will be able to:
	44.01 Review the anatomy and physiology of organs and structures related to abdominal injuries.
	44.02 Describe the mechanism of injury for and types of open and closed abdominal and retroperitoneal injuries involving seat belts, penetrating, blunt and evisceration.

	44.03 Describe and demonstrate the pathophysiology, signs and symptoms and the assessment and management for, including but not limited to: • Pelvic fractures. • Solid organ injuries • Hollow organ injuries • Abdominal vascular injuries • Retroperitoneal space (kidneys) • Genitourinary system
	44.04 Review the psychological considerations associated with genitourinary injuries.
45.0	**Orthopedic Trauma:** Demonstrate a fundamental depth, foundational breadth of knowledge of pathophysiology, assessment, and management of orthopedic trauma, patients of all ages. The student will be able to:
	45.01 Review the anatomy and physiology of the musculoskeletal system, include the healing process.
	45.02 Discuss pathophysiology, signs and symptoms, and MOI for orthopedic trauma.
	45.03 Define the different types of orthopedic trauma including fracture classifications.
	45.04 List the 6 “P” orthopedic injury assessment.
	45.05 Discuss the following management techniques: • Heat therapy • Cold therapy • Splinting
	45.06 Describe and demonstrate the assessment and management of a patient with a suspected orthopedic trauma including medication administration (analgesics and anxiolytics).
	45.07 Discuss the need for assessment of distal pulses, motor, and sensation before and after splinting.
	45.08 Review age-associated changes in bones.
	45.09 Define luxation and subluxation.
	45.10 Explain the rationale for splinting at the scene versus load and go.
	45.11 Demonstrate the proper use various splinting materials and devices to include improvised and traction splints.
	45.12 Discuss and demonstrate the assessment and management of compartment and crush syndrome: • destination decision • rhabdomyolysis
	45.13 Discuss the pathophysiology and demonstrate the assessment and management of a tendon injury to the knee (patellar), shoulder, and Achilles.

	45.14 Discuss the proper procedure to package an amputated body part for replantation.
46.0	**Soft Tissue Trauma:** Demonstrate a complex depth, comprehensive breadth of knowledge of pathophysiology, assessment, and management of soft tissue trauma, patients of all ages. The student will be able to:
	46.01 Review anatomy and physiology and identify the major functions of the integumentary system.
	46.02 Discuss the pathophysiology of soft tissue injuries and the healing process including: • Inflammation • Epithelialization • Neovascularization • Collagen Synthesis • Alterations in would healing • Abnormal scar formation
	46.03 Describe and demonstrate the assessment and management of various soft tissue injuries.
	46.04 Identify types of burn injuries including: • Thermal burn • Chemical burn • Electrical burn • Radiation burn
	46.05 Describe the depth classification of burn injuries including: • Superficial burn • Partial-thickness burn • Full-thickness burn • Other depth classification
	46.06 Describe and demonstrate methods for determining body surface area percentage of a burn injury including the “rule of nines”, the “rule of palms”, and other methods.
	46.07 Explain how the seriousness of a burn is related to its depth and percentage of body surface area (BSA) involved.
	46.08 Review the various management techniques for hemorrhage control.
	46.09 Differentiate among the types of injuries requiring the use of occlusive versus non-occlusive dressing.
	46.10 Demonstrate the proper use of any Morgan□ type lens for irrigation of the eye.
	46.11 Demonstrate the assessment and management of specific burn injuries including: • Thermal • Inhalation • Chemical • Electrical • Radiation

	46.12 Describe the pathophysiologic complications and systemic complications of a burn injury.
	46.13 Discuss comorbidities in burn patients.
	46.14 Describe the management of a burn injury, including airway and ventilation, circulation, pharmacological, non-pharmacological, transport considerations, psychological support/ communication strategies, and other management.
	46.15 Describe the types of chemicals and their burning processes and a chemical burn injury to the eye.
	46.16 Discuss appropriate fluid resuscitation for burn patients.
47.0	**Head, Face, Neck, and Spine:** Demonstrate a fundamental depth, foundational breadth of knowledge of head, face, neck, and spine trauma, patients of all ages. The student will be able to:
	47.01 Discuss types of and potential complications of facial injuries.
	47.02 Discuss pathophysiology, signs and symptoms, assessment and management, and a field impression for injuries to the following areas: • Eye(s) • Nose • Throat/neck • Face • Mouth • Ear(s)
	47.03 Distinguish between an open and closed head injury.
	47.04 Define and explain the process involved with increasing ICP.
	47.05 Describe and demonstrate the assessment and general management of the head/ brain injury patient, including pharmacological and non-pharmacological treatment.
	47.06 Discuss the pathophysiology, signs and symptoms, and assessment and management for a patient for each of the following conditions: • Skull fracture • Cerebral contusion • Intracranial hemorrhage • Epidural, subdural, intracerebral, and subarachnoid • Perforated tympanic membranes • Orbital fracture • Mandibular fracture
	47.07 Review various methods for stabilization and removal of a helmet.
48.0	**Nervous System Trauma:** Demonstrate a fundamental depth, foundational breadth of knowledge of nervous system trauma, patients of all ages. The student will be able to:

	48.01 Review the anatomy and physiology of the central nervous system, brain, spinal cord, skull and spinal column.
	48.02 Discuss pathophysiology, signs and symptoms, assessment, and management of the following nervous system injury including: • Cauda Equine syndrome • Peripheral nerve injuries • Intracerebral hemorrhage • Cranial fractures • Brain tissue injuries • Spinal cord injuries • Brown-Sequard Syndrome • Anterior cord syndrome • Central cord syndrome • Spinal shock
	48.03 Discuss the mechanism of injury which would result in a nervous system injury.
	48.04 Review the rationale for and potential for motion restriction for the entire spine when a cervical spine injury is suspected
	48.05 Discuss the research involving the management of nervous system injuries and patient management.
49.0	**Special Considerations in Trauma:** Demonstrate a complex depth, comprehensive breadth of knowledge of special considerations in trauma, patients of all ages. The student will be able to:
	49.01 Integrate the assessment and management differences associated with the following special populations: • Pregnancy • Pediatric • Geriatric
50.0	**Environmental Emergencies:** Demonstrate a complex depth, comprehensive breadth of knowledge of environmental emergencies patients of all ages. The student will be able to:
	50.01 Discuss the pathophysiology, signs and symptoms, assessment and management and MOI of the following: • Drowning and water related incidents • Temperature-related illness • Bites and envenomation • Diving injuries • Lightning (electrical) injury • High altitude illness
	50.02 Identify environmental factors that may cause illness, exacerbate preexisting illness and complicate treatment or transport decisions.
	50.03 Review several methods of temperature monitoring.
	50.04 Describe the general process of thermal regulation, including substances used and wastes generated.

	50.05 Define fever and discuss its pathophysiologic mechanism.
	50.06 Discuss the role of fluid therapy in the treatment of temperature related emergencies.
	50.07 Review the gas laws related to the pathophysiology of injury in a submersion emergency.
	50.08 Describe the function of the Divers Alert Network (DAN) and how its members may aid in the management of diving-related illnesses.
	50.09 Differentiate among the various treatments and interventions for the management of diving accidents.
	50.10 Describe the specific function and benefit of hyperbaric oxygen therapy for the management of diving accidents.
51.0	**Multi-Systems Trauma:** Demonstrate a complex depth, comprehensive breadth of knowledge of multi-system trauma and blast injuries. The student will be able to:
	51.01 Review the priority of care in the multisystem trauma patient.
	51.02 Explain which ALS interventions should occur prior to a transport decision and during transport.
52.0	**Obstetrics:** Demonstrate a complex depth, comprehensive breadth of knowledge of the management of the obstetric patient within the scope of practice of the paramedic. The student will be able to:
	52.01 Review the anatomy and physiology of the reproductive system.
	52.02 Define the stages of labor and discuss how to assess them.
	52.03 Differentiate between cephalic and abnormal delivery.
	52.04 Describe the management of a patient with pre-delivery emergencies.
	52.05 Discuss and demonstrate the patient care for all stages of labor in a cephalic delivery for the mother and the newborn.
	52.06 Describe the procedures for handling complications of delivery.
	52.07 Describe the management of the mother post-delivery.
	52.08 Demonstrate the procedures for handling complications of pregnancy including per-eclampsia and high risk.
	52.09 Describe the management of the mother post-delivery.
	52.10 Discuss and demonstrate the patient care measures for all stages of labor in abnormal deliveries for the mother and the newborn.
	52.11 Describe special considerations when meconium is present in amniotic fluid or during delivery.
53.0	**Neonatal Care:** Demonstrate a complex depth, comprehensive breadth of knowledge of the management of the neonatal patient within the scope of practice of the paramedic. The student will be able to:

	53.01 Review the term neonate.
	53.02 Identify antepartum and intrapartum factors that can affect the neonate.
	53.03 Discuss pulmonary perfusion and asphyxia.
	53.04 Calculate the Apgar score given various neonate situations.
	53.05 Review resuscitation equipment and procedures for the neonate
	53.06 Determine when an orogastric tube should be inserted during positive-pressure ventilation.
	53.07 Discuss the pathophysiology, signs and symptoms, assessment and management of the following, including but not limited to: • Apnea • Bradycardia • Acidosis • Pneumothorax • Meconium-stained • Low blood volume • Dysphemistic hernia • Respiratory distress • Respiratory depression secondary to narcotics • Low birth weight • Seizures • Hypoglycemia • Diarrhea • Jaundice • Fever • Hypothermia • Birth injuries • Cardiac conditions
	53.08 Discuss post arrest management of the neonate.
	53.09 Discuss vascular access cannulation techniques for a newborn including umbilical vein/artery access.
54.0	**Pediatrics:** Demonstrate a complex depth, comprehensive breadth of knowledge of the management of the pediatric patient within the scope of practice of the paramedic. The student will be able to:
	54.01 Discuss key anatomical, physiological, and developmental characteristics of infants and children and their implications.
	54.02 Review and demonstrate techniques for successful assessment and treatment of infants and children.

	54.03 Review airway and ventilatory considerations and procedures for pediatric patients.
	54.04 Discuss the indications and methods for gastric decompression for infants and children.
	54.05 Discuss the pathophysiology, signs and symptoms, assessment and management of the following, including but not limited to: • Altered level of consciousness • Trauma • Hypo-profusion • Respiratory distress/failure • Cardiac dysrhythmia • Neurological emergency • Abuse/neglect • SUIDS • FABO • Respiratory emergencies • Congenital heart disease • Hydrocephalus/VP shunts
	54.06 Discuss the appropriate procedure and equipment for vascular and intraosseous access.
	54.07 Review basic cardiac life support (CPR) guidelines for infants and children.
	54.08 Integrate advanced life support skills with basic cardiac life support for infants and children.
	54.09 Discuss the indications, dosage, route of administration and special considerations for medication administration in infants and children.
	54.10 Describe Sudden Unexplained Infant Death Syndrome (SUIDS), current theories, assessment and management, and the immediate needs of the family.
	54.11 Discuss the parent/caregiver responses to the death of an infant or child.
	54.12 Discuss and demonstrate the use of a length-based resuscitation tape and other methods for determining equipment sizes, drug doses, and other pertinent information for a pediatric patient.
	54.13 Discuss proper placement of a gastric tube in infants and children.
	54.14 Review appropriate routes and techniques for medication administration.
	54.15 Demonstrate appropriate parent/caregiver interviewing techniques for infant and child death situations.
55.0	**Geriatrics:** Demonstrate a complex depth, comprehensive breadth of knowledge of the management of the geriatric patient within the scope of practice of the paramedic. The student will be able to:
	55.01 Review and discuss the term geriatrics

	55.02 Review the anatomy, physiology, and pathophysiology of the geriatric patient.
	55.03 Discuss common emotional and psychological concerns and conditions of the geriatric patient.
	55.04 Discuss the importance of fall prevention with the geriatric patient.
	55.05 Describe principles that should be employed when assessing and communicating with the geriatric patient.
	55.06 Describe the common causes, assessment and management of the geriatric patient with a medical, trauma, or psychosocial complaint.
	55.07 Discuss the impact of polypharmacy and medication non-compliance on patient assessment and management.
	55.08 Discuss medication issues of the elderly including polypharmacy, dosing errors and increased drug sensitivity and toxicology.
56.0	**Patients with Special Challenges:** Demonstrate a complex depth, comprehensive breadth of knowledge of management of the patient with special challenges within the scope of practice of the paramedic patients of all ages. The student will be able to:
	56.01 Discuss the special considerations required when providing emergency care to patients with: • Abuse/neglect of vulnerable populations • Homelessness • Poverty • Bariatrics • Tech dependent • Hospice/terminally ill • Tracheostomy • Home care • Sensory deficit/loss • Developmental disability
	56.02 Discuss special considerations regarding common medical devices used in the home care of patients with special challenges including: • Respiratory devices • Cardiac devices • Gastro-urinary devices • Central & peripheral IV catheters
	56.03 Describe home care and the types of patients it serves and the services it encompasses.
	56.04 Describe the characteristics associated with the profile of the typical abuser of: • Domestic abuser • Elder abuser • Child abuser
	56.05 Discuss the role of the Paramedic as a patient advocate for vulnerable populations.

	56.06 Differentiate between hospice/palliative care and curative care.
	56.07 Describe paraplegia/quadriplegia.
	56.08 Describe the various etiologies of mental illness.
	56.09 Recognize the presenting signs of the following: • Autism spectrum • Developmental disability • Down's syndrome
	56.10 Describe the following diseases/illnesses and identify each of their possible presenting signs, including but not limited to: • Arthritis • Cancer • Cerebral palsy • Cystic fibrosis • Multiple sclerosis • Muscular dystrophy • Myasthenia gravis • Poliomyelitis • Spina bifida, • Patients with a previous head injury • Mental illness
	56.11 Review hospice care, comfort care and DNR/DNAR as they relate to local practice, law and policy.
	56.12 Describe the access and discuss indwelling catheters, implanted central IV ports and central line monitoring.
	56.13 Describe complications of assessing each of the airway, vascular access, and GI/GU devices.
	56.14 Identify and describe the failure of wound drains.
	56.15 Review the rights of the terminally ill.
	56.16 Demonstrate proper tracheotomy care.
	56.17 Demonstrate the insertion of a new inner cannula and/or the use of an endotracheal tube to temporarily maintain an airway in a tracheostomy patient.
57.0	**Principles of Safely Operating a Ground Ambulance:** Demonstrate a simple depth, foundational breadth of knowledge of risks and responsibilities of transport. The student will be able to:
	57.01 Review the EMT standards and benchmarks for the Principles of Safely Operating a Ground Ambulance.
58.0	**Incident Management:** Demonstrate a complex depth, comprehensive breadth of knowledge of establishing and working within the incident management system. The student will be able to:

	58.01 Review the EMT standards and benchmarks for Incident Management and apply a complex depth and comprehensive breadth of establishing and working within the incident management system.
59.0	**Multiple Casualty Incidents:** Demonstrate a simple depth, foundational breadth of knowledge of responding to an emergency during a multiple casualty incident. The student will be able to:
	59.01 Review the EMT standards and benchmarks for Multiple Casualty Incidents.
60.0	**Air Medical:** Demonstrate a complex depth, comprehensive breadth of knowledge of air medical transport risks, needs and advantages. The student will be able to:
	60.01 Describe the advantages and disadvantages of air medical transport.
	60.02 Identify appropriate reasons for the use of air medical for emergency patient transport.
	60.03 Describe the risks involved with the use of air medical transport.
	60.04 Demonstrate the actions needed to ensure effective and safe ground operations involving air medical response.
	60.05 Demonstrate appropriate communication of information needed for safe and effective interaction between the air medical crew and ground personnel.
61.0	**Vehicle Extrication:** Demonstrate a simple depth, simple breadth of knowledge for safe vehicle extrication and use of simple hand tools. The student will be able to:
	61.01 Review the EMT standards and benchmarks for Vehicle Extrication.
62.0	**Hazardous Materials Awareness:** Demonstrate a simple depth, simple breadth of knowledge of risks and responsibilities of operating in a cold zone at a hazardous material or other special incident. The student will be able to:
	62.01 Review the EMT standards and benchmarks for Hazardous Materials Awareness.
63.0	**Mass Casualty Incidents due to Terrorism and Disasters:** Demonstrate a simple depth, simple breadth of knowledge of risks and responsibilities of operating on the scene of a natural or man-made disaster. The student will be able to:
	63.01 Review the EMT standards and benchmarks for Mass Casualty Incidents.

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as, experimental, quality, and safety procedures are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate and troubleshoot equipment/tools used to make observations. Students understand measurement error; and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

Special Notes

The Paramedic standards and benchmarks in this framework include all of the content, knowledge and skills at the EMT level in addition to the Paramedic objectives. For those standards that state "Review EMT Objectives." Please refer to the EMT curriculum framework for specific objectives.

The Student Performance Standards for Paramedic were adapted and condensed from the most current U S Department of Transportation, National EMS Educational Standards for the Paramedic. Administrators and instructors should refer to these materials for additional detail.

Career and Technical Student Organization (CTSO)

CTSOs are co-curricular career and technical student organizations providing leadership training and reinforcing specific career and technical skills. Career and Technical Student Organizations provide activities for students as an integral part of the instruction offered. Other CTSOs not listed in this curriculum framework or recognized by the Florida Department of Education are permissible provided they support student mastery over the standards and benchmarks of this curriculum framework.

Basic Skills

In Career Certificate programs offered for 450 hours or more, in accordance with Rule 6A-10.040, F.A.C., the minimum basic skills grade levels required for postsecondary adult career and technical students to complete this program are: Computation (Mathematics) and Communications (Reading and Language Arts). These grade level numbers correspond to a grade equivalent score obtained on a state designated basic skills examination.

Adult students with disabilities, as defined in Section 1004.02, Florida Statutes, may be exempted from meeting the Basic Skills requirements (Rule 6A-10.040). Students served in exceptional student education (except gifted) as defined in s. 1003.01, F.S., may also be exempted from meeting the Basic Skills requirement. Each school district and Florida College System Institution must adopt a policy addressing procedures for exempting eligible students with disabilities from the Basic Skills requirement as permitted in Section 1004.91, F.S.

Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

Note: postsecondary curriculum and regulated secondary programs cannot be modified.

Program Length

In accordance with Rule 6A-10.024, F.A.C. an ATD program consists of a course of study that is part of an AS or AAS degree program, is less than 60 credit hours, is approximately 50% of the technical component (non-general education), and leads to employment in a specific occupation. An ATD program may consist of either technical credit or college credit.

Students must have a high school diploma, a GED, or a certificate of completion to be admitted to an ATD program. Within six weeks of entry, students in ATD programs of 450 or more hours must be tested pursuant to Rule 6A-10.040, F.A.C. and if below minimum standards for completion from the program, must receive remedial instruction. The minimum standards must be at least the equivalent of a score of ten (10) on all sections of basic skills test approved in Rule 6A-10.040, F.A.C. Students must successfully complete all remedial instruction before completing the ATD.

Community Colleges may offer either college or career credit toward the ATD. A Career Center in a public school district may offer an ATD program only as technical credit, with college credit awarded to a student upon articulation to a community college (Section 1004.02, F.S.)

When offered at a state college the standard length of this program is 42 credits. When offered at a technical college the standard length of this program is 1100 clock hours.

Section 401.2701, Florida Statutes, provides that college credit programs must meet occupational completion point hours of instructional and skills practice components.

In accordance with Rule 6A-10.024, F.A.C. all faculty providing instruction must have at least a baccalaureate degree or an associate degree with demonstrated competencies in the specific instructional program as defined by the Southern Association of Colleges and Schools.

Florida Department of Education
Curriculum Framework

The standards and benchmarks for this program were updated for the 2026-27 academic year. This program title has changed, formerly Surgical Technology Specialist.

Program Title: **Surgical Technician**
Career Cluster: **Health Science**

College Credit Certificate	
CIP Number	0351090904
Program Type	College Credit Certificate (CCC)
Program Length	49 credit hours
CTSO	HOSA
SOC Codes (all applicable)	For program SOC codes, please see the Program and Course Tables section of the CTE Program Resources page linked below.
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml

Purpose

This certificate program is part of the Surgical Services AS degree program (1351090901).

A College Credit Certificate consists of a program of instruction of less than sixty (60) credits of college-level courses, which is part of an AS or AAS degree program and prepares students for entry into employment (Rule 6A-14.030, F.A.C.).

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Health Science career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of Health Science career cluster.

The program is designed to prepare students for employment as surgical technicians.

The content includes but is not limited to communication and interpersonal skills, legal and ethical responsibilities, anatomy, physiology, pathophysiology, microbiology, aseptic techniques, patient care procedures, surgical technology procedures, patient safety, use and care of equipment and supplies, CPR, Heart saver, employability skills, and basic computer literacy.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Florida's Career Readiness Skills for CTE Programs

Employability Skills	
01.0	Apply academic skills to workplace scenarios.
01.01	Use reading skills.
01.02	Use writing skills.
01.03	Use mathematical strategies and procedures.
01.04	Use scientific principles and procedures.
02.0	Design a solution to an industry problem.
02.01	Use critical thinking.
02.02	Use creativity.
02.03	Make sound decisions.
02.04	Solve problems.
02.05	Reason.
02.06	Plan and organize.
03.0	Manage resources within an industry project
03.01	Manage time.
03.02	Manage money or resources.
03.03	Manage materials.
03.04	Manage personnel.
04.0	Oversee the subcomponents, operations and output of a technical or organizational system.
04.01	Manage systems.
04.02	Monitor systems.
04.03	Improve systems.
05.0	Use information for decision making.
05.01	Locate information.
05.02	Organize information.
05.03	Use information.

	05.04 Analyze information.
	05.05 Communicate information.
06.0	Apply relevant technology to workplace scenarios to aid productivity.
	06.01 Use technology.
07.0	Interpret and express interpersonal communication.
	07.01 Communicate verbally.
	07.02 Listen actively.
	07.03 Comprehend written material.
	07.04 Convey information in writing.
	07.05 Communicate nonverbally.
	07.06 Interpret nonverbal communication.
08.0	Interact with others to accomplish workplace goals.
	08.01 Collaborate with others in a team.
	08.02 Respond to customer needs.
	08.03 Exercise leadership.
	08.04 Negotiate to resolve conflict.
	08.05 Respect others.
09.0	Manage personal behavior to maximize productivity and professional growth.
	09.01 Demonstrate responsibility and self-discipline.
	09.02 Adapt and show flexibility.
	09.03 Work independently.
	09.04 Demonstrate a willingness to learn.
	09.05 Demonstrate integrity.
	09.06 Demonstrate professionalism.
	09.07 Take initiative.
	09.08 Display positive attitude.
	09.09 Take responsibility for professional growth.

Job Attainment	
10.0	Find, assess and apply to job opportunities.
10.01	Identify online job posts relevant to his or her career aspirations.
10.02	Compare and contrast the job posts' required qualifications, job duties, compensation, benefits and employers.
10.03	Define what information, documentation and writing prompts are required for the positions.
11.0	Communicate personal competence, character and fit for a job opportunity.
11.01	Develop a resume.
11.02	Write a cover letter.
11.03	Curate a professional portfolio that includes work products.
11.04	Prepare for and experience a mock job interview.
12.0	Cultivate and leverage relationships to professionally advance.
12.01	Request a signed reference letter, letter of recommendation and/or an online skill/professionalism endorsement.
12.02	Develop a plan to cultivate a professional digital footprint.
12.03	Develop a networking plan for a specific industry of interest.

Standards

After successfully completing this program, the student will be able to perform the following:

01.0 Demonstrate knowledge of the healthcare delivery system and health occupations.
02.0 Demonstrate the ability to communicate and use interpersonal skills effectively.
03.0 Demonstrate legal and ethical responsibilities.
04.0 Demonstrate an understanding of and apply wellness and disease concepts.
05.0 Recognize and practice safety and security procedures.
06.0 Recognize and respond to emergency situations.
07.0 Recognize and practice infection control procedures.
08.0 Demonstrate an understanding of information technology applications in healthcare.
09.0 Demonstrate employability skills.
10.0 Demonstrate knowledge of blood-borne diseases, including HIV/AIDS.
11.0 Apply basic math and science skills.
12.0 Demonstrate sterile processing skills.
13.0 Use communication and interpersonal skills related to surgical technology.
14.0 Demonstrate an understanding of the basic sciences related to surgical technology.
15.0 Demonstrate knowledge of anesthesia, pharmacology, and math calculation principles related to the surgical environment.
16.0 Describe and demonstrate safety measures in the surgical environment.
17.0 Assist the Registered Nurse (RN) with patient care procedures related to the surgical environment and describe methods for meeting patients' needs.
18.0 Demonstrate knowledge of the skills necessary for perioperative case management.
19.0 Demonstrate knowledge of and assist with surgical procedures.
20.0 Demonstrate an understanding of legal and ethical responsibilities specific to surgical technology.

Florida Department of Education
Student Performance Standards

Program Title: **Surgical Technician**
CIP Numbers: **0351090904**
Program Length: **49 credit hours**

Standards 1-11 are referred to as the **Health Science Core** and are required standards in this program. Secondary and Postsecondary students completing the health science core will not have to repeat the core in any other health science program in which it is a part. When the recommended sequence is followed, the structure allows students to complete at specified points for employment or remain for advanced training or cross-training.

To ensure consistency whenever these courses are offered, the health science core standards (1-11) and benchmarks have been placed in a separate document. To access this document, visit this link:
https://www.fldoe.org/core/fileparse.php/20569/urlt/health-sci-core-psav-cc-2324.rtf

This certificate program is part of the Surgical Services AS degree program (1351090901). At the completion of this program, the student will be able to:	
Students completing intended outcomes 12-20, in addition to the health careers core, will meet the requirements of the Surgical Technician CCC.	
12.0	Demonstrate sterile processing skills. The student will be able to:
12.01	Apply the principles of medical/surgical asepsis, including attire, environmental control, and traffic patterns, to control and manage dirty, clean, and sterile areas of the operating room and sterile processing.
12.02	Apply infection control techniques following the Centers for Disease Control (CDC) guidelines.
12.03	Inspect and send out for repair instruments, equipment, and supplies regarding condition and quality.
12.04	Describe the methods of disinfection and sterilization.
12.05	Demonstrate the handling, inspection, and notification process regarding package integrity.
12.06	Demonstrate correctly decontamination techniques for instruments, equipment, and the environment used for surgical procedures.
12.07	Describe clean and sterile transportation, restocking, and storage principles for instruments, supplies, and equipment.
12.08	Identify instruments, supplies, and equipment used for surgical procedures.
12.09	Demonstrate the ability to prepare and label items for high-level disinfection and sterilization correctly.
12.10	Demonstrate the techniques of high-level disinfection and sterilization for surgical instruments.

	12.11 Demonstrate case cart preparation and management.
13.0	Use communication and interpersonal skills related to surgical technology. The student will be able to:
	13.01 Describe various forms of communication within the role of surgical technologist.
	13.02 Discuss the goals of effective communication.
	13.03 Demonstrate appropriate body language and non-verbal communication in the surgical environment.
	13.04 Analyze and select the appropriate behavioral response to meet the patient's individual needs.
	13.05 Identify the concepts of conflict resolution, assertive behavior, and the principles of teamwork in the surgical environment.
	13.06 Advocate for patients to ensure that they are included in the healthcare decision-making processes.
14.0	Demonstrate an understanding of the basic sciences related to surgical technology. The student will be able to:
	14.01 Identify prefixes, roots, and suffixes for medical terms used by surgical technologists.
	14.02 Pronounce and write medical terms correctly, along with identifying abbreviations.
	14.03 Identify the basic organizational structures of the human body, including body planes, regions, quadrants, and terms of reference.
	14.04 Analyze the basic structure of cells and relate cellular components to integrated cell function.
	14.05 Analyze the types of tissue that make up organs and the characteristics of each.
	14.06 Describe the relationship between organs and systems in the body.
	14.07 Analyze the different body systems for composition and function.
	14.08 Correlate the impact of microbiology on the practice of sterile technique and infection control in the operative setting.
	14.09 Compare and contrast the structure and characteristics of microorganisms found in the surgical environment.
	14.10 Relate medical terminology, medical abbreviations, and anatomy and physiology to surgical specialties and specific procedures.
	14.11 Analyze the various immune responses that occur in the body as defenses against invasion by pathogens.
	14.12 Identify the infectious process in surgical practice.
	14.13 Demonstrate infection and disease transmission control techniques following the Centers for Disease Control (CDC) and Occupational Safety and Health Administration (OSHA) guidelines for surgery.
	14.14 Identify wound classifications and wound healing principles within wound management guidelines.

	14.15 Discuss the principles of information technology, electricity, and robotics as they relate to surgery.
	14.16 Relate pathophysiology to surgical interventions.
	14.17 Examine hemodynamic disorders, inflammation, and infection.
15.0	Demonstrate knowledge of anesthesia, pharmacology, and math calculation principles related to the surgical environment. The student will be able to:
	15.01 Describe the roles of the anesthesia provider and circulating nurse.
	15.02 Analyze the principles of anesthesia administration and explain the necessity of each component of anesthesia preparation for the surgical patient.
	15.03 Compare and contrast methods, agents, and techniques of anesthesia administration and preparation.
	15.04 Examine anesthesia monitoring devices with patient homeostasis.
	15.05 Describe potential anesthesia and operative complications and interventions for each.
	15.06 Define the terminology and describe the basic concepts of pharmacology, including pharmacokinetics and pharmacodynamics.
	15.07 Identify the classifications, actions, effects, and precautions for common drugs used at the sterile field and within the surgical environment.
	15.08 Demonstrate the application of the six rights of medication administration (right patient, right medication, right dosage, right route, right time/frequency, and right documentation).
	15.09 Analyze and assemble correctly all medication supplies to be used with drugs on the sterile field.
	15.10 Demonstrate the appropriate methods of transferring and accepting medications onto the sterile field.
	15.11 Prepare, manage, and label sterile solutions and medications accurately within the sterile field.
	15.12 Correctly calculate common medication conversions and dosages.
	15.13 Demonstrate preparation and passing of medication mixtures using ratios and proportions correctly.
	15.14 Maintain an accurate account of the amount of each medication and/or solution used and notify the Registered Nurse (RN) to ensure accurate documentation.
16.0	Describe and demonstrate safety measures in the surgical environment. The student will be able to:
	16.01 Describe the role, job duties, and responsibilities of the surgical technologist in the surgical setting.
	16.02 Inspect equipment and supplies for condition and quality.
	16.03 Demonstrate appropriate safety measures to prevent operating room fires and electrical shock from equipment.

	16.04 Describe appropriate safety measures for laser and electrosurgical unit usage in surgery.
	16.05 Describe appropriate regulatory and accreditation agency patient safety guidelines.
	16.06 Describe the role of the surgical technologist in a disaster situation.
	16.07 Describe the role of the surgical technologist in an emergency patient situation.
	16.08 Assist with the preparation of the operative site.
17.0	Assist the Registered Nurse (RN) with patient care procedures related to the surgical environment and describe methods for meeting patients' needs. The student will be able to:
	17.01 Demonstrate patient transfer/transportation techniques used in the operating room (OR).
	17.02 Demonstrate the ability to monitor OR traffic and ensure that the sterility of the room is kept secure.
	17.03 Assist with positioning and apply safety devices correctly to the patient for surgery.
	17.04 Describe the function, assembly, application, and care of critical specialty equipment utilized.
	17.05 Identify anesthesia monitoring devices, patient complications, and interventions for maintaining patient homeostasis.
	17.06 Demonstrate correctly the connection and operation of essential equipment for the surgical procedure.
	17.07 Perform steps for Foley catheter insertion and connecting to drainage correctly.
	17.08 Demonstrate applicable wound management principles, including the placement and security of catheters, wound drainage systems, sterile dressings, and splint applications.
	17.09 Discuss relevant and unique factors regarding postoperative care specific to the procedure.
18.0	Demonstrate knowledge of the skills necessary for perioperative case management. The student will be able to:
	18.01 Identify the types of surgical attire, accessory attire, and the roles of each.
	18.02 Demonstrate the principles associated with donning or doffing surgical attire.
	18.03 Describe the principles associated with establishing the sterile field.
	18.04 Select and verify required instrumentation, equipment, and supplies, including any implants needed for specific surgical procedures, using knowledge and the applicable surgeon preference/procedure cards.
	18.05 Demonstrate and explain the sequence of opening sterile supplies.
	18.06 Explain the steps for organizing a back table.

18.07	Explain the steps for organizing a mayo stand.
18.08	Describe the final steps required to finish establishing the sterile field.
18.09	Analyze special circumstances that require adjusting the normal routine for establishing the sterile field.
18.10	Demonstrate the surgical scrub and donning of a sterile gown and gloves.
18.11	Recognize the application of sterile technique principles, including the appropriate corrective action for common breaks in sterile technique.
18.12	Demonstrate proper draping of tables, solution stands, mayo stand, patient, and equipment.
18.13	Demonstrate the setup and management of the sterile mayo stand and/or instrument table(s).
18.14	Select suture and needle appropriately for each scenario given based on function and type.
18.15	Prepare, pass, and monitor sharps, sutures, ligatures, ties, and staples.
18.16	Demonstrate assisting gowning and gloving of other sterile team members.
18.17	Participate in the surgical time out to prevent wrong-site surgery and delays in the surgical procedure.
18.18	Prepare and pass instruments, equipment, tissue replacement materials, implants, and supplies appropriately.
18.19	Observe the surgical site regarding counted items, stage of surgery, tissue appearance, and patient's body fluids.
18.20	Demonstrate correctly the initiation and completion of counts regarding sponges, sharps, instruments, and miscellaneous countable items.
18.21	Demonstrate ability to maintain retraction, cut suture, and hold instruments in the second scrub role as directed by the surgeon.
18.22	Demonstrate ability to prepare, validate, handle, and preserve specimens on and off the sterile field accurately for laboratory analysis.
19.0	Demonstrate knowledge of and assist with surgical procedures. The student will be able to:
19.01	Identify the preoperative diagnosis, diagnostic interventions, complications, and operative pathophysiology relative to surgical procedures.
19.02	Describe the types of incisions, methods of wound closure, and mechanisms of wound management care.
19.03	Describe the usual sequence of surgical procedures.
19.04	Select the appropriate instrument, equipment, or supply for each step of the procedure.
19.05	Demonstrate effective perioperative case management, ensuring cost control and time/motion economic methods are utilized to maximize the efficiency of the OR team.

20.0	Demonstrate an understanding of legal and ethical responsibilities specific to surgical technology. The student will be able to:
	20.01 State methods, standards, and aids that assist a surgical technologist with interpreting and following legal responsibilities.
	20.02 Understand the influence of ethics in professional practice.
	20.03 Explain the role of morality during ethical decision-making.
	20.04 Provide evidence of ethical situations and problems in the healthcare profession.
	20.05 Describe the principles of problem solving and confidentiality in ethical decision-making.
	20.06 Discuss and demonstrate the key elements related to developing a surgical conscience.
	20.07 Analyze the concepts of legal and ethical responsibilities.
	20.08 Define the various types of legal doctrines.
	20.09 Discuss the standards of conduct.
	20.10 Analyze the legal elements of proper documentation.
	20.11 Describe the types of sentinel events.
	20.12 Describe the importance of risk management.

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as, experimental, quality, and safety procedures are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate and troubleshoot equipment/tools used to make observations. Students understand measurement error; and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

The Human Patient Simulator (HPS) or other accepted simulation scenarios may be used for a limited number of clinical hours. A low teacher-student ratio in the lab and clinical area is strongly recommended. The recommended maximum ratio is 1:6.

Special Notes

Selected portions of this program may be utilized to provide additional skills to enable nursing graduates to become employable in operating rooms as surgical technologists. The program should meet the requirements of the Commission on Accreditation of Allied Health Education Programs (CAAHEP) or Accrediting Bureau of Health Education Schools (ABHES).

This program focuses on broad, transferable skills and stresses understanding and demonstration of the following elements of the health care industry; planning, management, finance, technical and production skills, underlying principles of technology, labor issues, community issues and health, safety, and environmental issues.

This program meets the Department of Health's education requirements for HIV/AIDS, Domestic Violence and Prevention of Medical Errors. Although not a requirement for initial licensure, it is a requirement for renewal, therefore the instructor **may** provide a certificate for renewal purposes to the student verifying these requirements have been met.

If students in this program are seeking a licensure, certificate or registration through the Department of Health, please refer to 456.0635, F.S. for more information on disqualification for a license, certificate, or registration through the Department of Health.

After successful completion of a Commission on Accreditation of Allied Health Education Programs (CAAHEP) or Accrediting Bureau of Health Education Schools (ABHES) accredited program, students are eligible to take the National Board of Surgical Technologists and Surgical Assisting (NBSTSA) Certified Surgical Technologist exam.

Please contact NBSTSA for more information on this exam:

National Board of Surgical Technologists and Surgical Assisting (NBSTSA) http://nbstsa.org/
6 West Dry Creek Circle, Suite 100, Littleton, Colorado 80120
Toll-free: (800) 707-0057

The Core should be taken first in the program. Following the successful completion of the core, the student is eligible to take the National Health Care Foundation Skill Standards Assessment with instructor approval and the completion of a portfolio.

Career and Technical Student Organization (CTSO)

CTSOs are co-curricular career and technical student organizations providing leadership training and reinforcing specific career and technical skills. Career and Technical Student Organizations provide activities for students as an integral part of the instruction offered. Other CTSOs not listed in this curriculum framework or recognized by the Florida Department of Education are permissible provided they support student mastery over the standards and benchmarks of this curriculum framework.

Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

Florida Department of Education
Curriculum Framework

The standards and benchmarks for this program were updated for the 2026-27 academic year.

Program Title: **Surgical First Assistant**
Career Cluster: **Health Science**

College Credit Certificate	
CIP Number	0351090908
Program Type	College Credit Certificate (CCC)
Program Length	59 credit hours
CTSO	HOSA
SOC Codes (all applicable)	For program SOC codes, please see the Program and Course Tables section of the CTE Program Resources page linked below.
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml

Purpose

This certificate program is part of the Surgical First Assisting AS degree program (1351090900).

A College Credit Certificate consists of a program of instruction of less than sixty (60) credits of college-level courses, which is part of an AS or AAS degree program and prepares students for entry into employment (Rule 6A-14.030, F.A.C.).

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Health Science career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of Health Science career cluster.

The program is designed to prepare students for employment as a Surgical First Assistant.

The content includes, but is not limited to, communication and interpersonal skills, legal and ethical responsibilities, anatomy, physiology, pathophysiology, microbiology, aseptic techniques, patient care procedures, surgical procedures, patient safety, use and care of equipment and supplies, CPR, Heartsaver, employability skills, basic computer literacy and surgical first assistant skills such as preoperative duties, aid in exposure, hemostasis, closure, intraoperative technical functions, and postoperative duties under the direction and supervision of the surgeon.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Program Structure

When developing the course sequence for the local implementation of this program, select courses that:

- Meet the skill development requirements of the standards and benchmarks of this program.
- Where reasonable and practicable, align with programs offered by your institution or other postsecondary institutions in Florida, including:
  - Related AS and AAS degrees.
  - Baccalaureate degrees within the same career pathway and/or Federal CIP code.

Visit FloridaShines' Discover Programs website to identify other institutions that offer similar programs to review their course sequencing. Where appropriate, course alignment between institutions offering related programs can facilitate interagency student articulation.

Visit FloridaShines' Common Prerequisites Manual to identify courses that are prerequisites for admission into an upper division program. When sub-baccalaureate courses are aligned to the course admissions requirements of baccalaureate programs with the same career pathway, students can enter upper division coursework seamlessly.

Florida's Career Readiness Skills for CTE Programs

Employability Skills	
01.0	Apply academic skills to workplace scenarios.
01.01	Use reading skills.
01.02	Use writing skills.
01.03	Use mathematical strategies and procedures.
01.04	Use scientific principles and procedures.
02.0	Design a solution to an industry problem.
02.01	Use critical thinking.
02.02	Use creativity.
02.03	Make sound decisions.
02.04	Solve problems.
02.05	Reason.
02.06	Plan and organize.
03.0	Manage resources within an industry project
03.01	Manage time.
03.02	Manage money or resources.
03.03	Manage materials.
03.04	Manage personnel.
04.0	Oversee the subcomponents, operations and output of a technical or organizational system.
04.01	Manage systems.
04.02	Monitor systems.
04.03	Improve systems.
05.0	Use information for decision making.
05.01	Locate information.
05.02	Organize information.
05.03	Use information.

	05.04 Analyze information.
	05.05 Communicate information.
06.0	Apply relevant technology to workplace scenarios to aid productivity.
	06.01 Use technology.
07.0	Interpret and express interpersonal communication.
	07.01 Communicate verbally.
	07.02 Listen actively.
	07.03 Comprehend written material.
	07.04 Convey information in writing.
	07.05 Communicate nonverbally.
	07.06 Interpret nonverbal communication.
08.0	Interact with others to accomplish workplace goals.
	08.01 Collaborate with others in a team.
	08.02 Respond to customer needs.
	08.03 Exercise leadership.
	08.04 Negotiate to resolve conflict.
	08.05 Respect others.
09.0	Manage personal behavior to maximize productivity and professional growth.
	09.01 Demonstrate responsibility and self-discipline.
	09.02 Adapt and show flexibility.
	09.03 Work independently.
	09.04 Demonstrate a willingness to learn.
	09.05 Demonstrate integrity.
	09.06 Demonstrate professionalism.
	09.07 Take initiative.
	09.08 Display positive attitude.
	09.09 Take responsibility for professional growth.

Job Attainment	
10.0	Find, assess and apply to job opportunities.
10.01	Identify online job posts relevant to his or her career aspirations.
10.02	Compare and contrast the job posts' required qualifications, job duties, compensation, benefits and employers.
10.03	Define what information, documentation and writing prompts are required for the positions.
11.0	Communicate personal competence, character and fit for a job opportunity.
11.01	Develop a resume.
11.02	Write a cover letter.
11.03	Curate a professional portfolio that includes work products.
11.04	Prepare for and experience a mock job interview.
12.0	Cultivate and leverage relationships to professionally advance.
12.01	Request a signed reference letter, letter of recommendation and/or an online skill/professionalism endorsement.
12.02	Develop a plan to cultivate a professional digital footprint.
12.03	Develop a networking plan for a specific industry of interest.

Standards

After successfully completing this program, the student will be able to perform the following:

01.0 Demonstrate knowledge of the health care delivery system and health occupations.
02.0 Demonstrate the ability to communicate and use interpersonal skills effectively.
03.0 Demonstrate legal and ethical responsibilities.
04.0 Demonstrate an understanding of and apply wellness and disease concepts.
05.0 Recognize and practice safety and security procedures.
06.0 Recognize and respond to emergency situations.
07.0 Recognize and practice infection control procedures.
08.0 Demonstrate an understanding of information technology applications in healthcare.
09.0 Demonstrate employability skills.
10.0 Demonstrate knowledge of blood-borne diseases, including HIV/AIDS.
11.0 Apply basic math and science skills.
12.0 Demonstrate sterile processing skills.
13.0 Demonstrate competencies in the components of the Surgical First Assistant related to communication and interpersonal skills.
14.0 Demonstrate an understanding of the basic sciences related to Surgical First Assisting.
15.0 Describe and practice safety measures in the surgical environment.
16.0 Perform patient care procedures related to the surgical environment and describe methods for meeting patients' needs.
17.0 Demonstrate knowledge of pharmacology and math calculation principles related to the surgical environment.
18.0 Demonstrate knowledge of the basic surgical skills necessary to function safely and effectively.
19.0 Demonstrate competencies in the components of the Surgical First Assistant related to knowledge and skills.
20.0 Demonstrate competencies in the components of the Surgical First Assistant related to legal and ethical responsibilities.

Florida Department of Education
Student Performance Standards

Program Title: **Surgical First Assistant**
CIP Number: **0351090908**
Program Length: **59 credit hours**

Standards 1-11 are referred to as the **Health Science Core** and are required standards in this program. Secondary and Postsecondary students completing the health science core will not have to repeat the core in any other health science program in which it is a part. When the recommended sequence is followed, the structure allows students to complete at specified points for employment or remain for advanced training or cross-training.

To ensure consistency whenever these courses are offered, the health science core standards (1-11) and benchmarks have been placed in a separate document. To access this document, visit this link:
https://www.fldoe.org/core/fileparse.php/20569/urlt/health-sci-core-psav-cc-2324.rtf

This certificate program is part of the Surgical First Assisting AS degree program (1351090900). At the completion of this program, the student will be able to:	
Students completing intended outcomes 12-20 will meet the requirements of the Surgical First Assistant CCC.	
12.0	Demonstrate sterile processing skills. The student will be able to:
12.01	Apply the principles of medical/surgical asepsis, including attire, environmental control, and traffic patterns, to control and manage dirty, clean, and sterile areas of the operating room and central supply.
12.02	Identify relevant federal, state, and local guidelines, standards, and regulations.
12.03	Apply ergonomic considerations and appropriate body mechanics for lifting, turning, pulling, pushing, reaching, and other work-related activities.
12.04	Describe the methods of disinfection and sterilization.
12.05	Describe the importance of following the device, equipment, instrument, or supply manufacturer's instructions for decontamination, processing, operation, and troubleshooting.
12.06	Demonstrate correctly decontamination techniques for instruments, equipment, and the environment used during surgical procedures.
12.07	Demonstrate appropriate techniques for inspection, testing, and sending out for repair instruments, equipment, and supplies regarding condition, quantity, and quality.
12.08	Describe clean and sterile transportation, restocking, and storage principles for instruments.
12.09	Analyze the results of sterilization process monitors used in sterilization units, sterilization cycles, and ensure documentation meets the safe parameters for each item prior to its use.

	12.10 Describe the clean and sterile transportation, restocking, and storage principles for supplies in the facility (receivables, sterile, and clean).
	12.11 Demonstrates the ability to identify and communicate the appropriate instruments, equipment, and supplies to the surgical team for any surgical procedure.
	12.12 Demonstrate the ability to prepare and label items for high-level disinfection and sterilization as required.
	12.13 Demonstrate the techniques of high-level disinfection and the process for Immediate Use Steam Sterilization when necessary (i.e., one-of-a-kind items).
	12.14 Describe various supply, distribution, and inventory control methods.
	12.15 Demonstrate the ability to verify case cart preparation and management.
13.0	Demonstrate competencies in the components of the Surgical First Assistant related to communication and interpersonal skills. The student will be able to:
	13.01 Demonstrate proper use of communication systems.
	13.02 Use various forms of communication in the role of Surgical First Assistant to communicate relevant, accurate, and complete information in a concise and clear manner.
	13.03 Collaborate with the patient, surgeon, and other members of the healthcare team to assess, plan, implement, and evaluate the patient's surgical care to promote positive outcomes, including the use of preoperative checklists, preoperative assessment, and evaluation methods.
	13.04 Demonstrate effective patient communication techniques.
	13.05 Demonstrate the ability to analyze and communicate specific patient care factors or needs and the surgeon's preferences to the surgical team, including suture needs, specialty supplies and instrumentation, and equipment.
	13.06 Describe the concepts of conflict resolution, assertive behavior, and the principles of teamwork as a patient advocate and assistant to the surgeon.
	13.07 Demonstrate competency regarding reporting and documentation responsibilities in the clinical setting.
	13.08 Employ leadership skills to accomplish the organization's goals and objectives.
	13.09 Establish and maintain effective working relationships with others in order to accomplish objectives and tasks.
	13.10 Conduct and participate in meetings to accomplish work tasks.
	13.11 Employ mentoring skills to support inexperienced team members.
14.0	Demonstrate an understanding of the basic sciences related to Surgical First Assisting. The student will be able to:
	14.01 Apply knowledge of the microbial environment to the surgical care of the patient.
	14.02 Analyze patient defense mechanisms, the chain of infection, and the infectious process as related to surgical practice and the prevention of surgical site infections.

14.03	Correlate wound classifications and wound healing principles with wound management guidelines and complications.
14.04	Demonstrate infection and disease transmission control techniques following the Centers for Disease Control (CDC) and Occupational Safety and Health Administration (OSHA) guidelines for surgery.
14.05	Describe the causes, clinical signs and symptoms, and prevention measures for surgical infections.
14.06	Describe the basic composition, principles, clinical signs, and symptoms regarding electrolytes and fluid balance.
14.07	Assess the clinical signs of hypovolemic, septic, hemorrhage, neurogenic, and cardiogenic shock.
14.08	Correlate the principles and disorders of hematology, hemostasis, types of blood components, and coagulation with hemostasis in surgery.
14.09	Discuss the principles of information technology, electricity, and robotics as they relate to surgery.
15.0	Describe and practice safety measures in the surgical environment. The student will be able to:
15.01	Inspect emergency equipment and supplies for condition and quantity.
15.02	Implement appropriate Joint Commission patient safety goals.
15.03	Demonstrate appropriate safety measures to prevent operating room fires and electrical shock from equipment.
15.04	Apply knowledge of surgical hazards to safe patient care.
15.05	Demonstrate the safe inspection and utilization of laser, electrical, endoscopic, and robotic equipment.
15.06	Describe and practice appropriate safety measures for laser, electrical, endoscopic, and robotic surgery.
15.07	Describe the role preventive maintenance, prevention, correction, and documentation play in patient and personnel safety and the prevention of medical errors in the surgical setting.
15.08	Describe the role of the surgical technologist and surgical first assistant in an emergency patient situation.
15.09	Describe the protocol for personal injury, including the completion of incident/occupancy reports and follow-up.
15.10	Describe the preparation and planning, detection and communication, incident management and support systems, safety and security, clinical/public health assessment and intervention, contingency, continuity and recovery, and the public health law and ethics of All-Hazards Preparation for disasters.
15.11	Conduct technical research to gather information for decision-making.
15.12	List and describe quality control systems and/or practices common to the workplace.
15.13	Employ critical thinking skills independently and in teams to solve problems, resolve conflicts, and make decisions.
16.0	Perform patient care procedures related to the surgical environment and describe methods for meeting patients' needs. The student will be

	able to:
16.01	Identify the roles of the members of the surgical team during each phase of surgery.
16.02	Assist surgeon with the perioperative care of the surgical patient.
16.03	Participate in the preoperative examination and preparation process for both surgery and anesthesia, with the identification of potential patient factors that may inhibit positive outcomes.
16.04	Describe appropriate review and identification of patient factors regarding the chart, including preoperative identification, preoperative checklists, diagnostic tests, lab values, and surgical consent.
16.05	Demonstrate safe patient transfer/transportation techniques used in the perioperative setting.
16.06	Monitor OR traffic, placement of sterile tables, and ensure steps are taken to reduce microbial fallout.
16.07	Describe anesthesia monitoring devices, patient complications, interventions, and maintaining patient homeostasis.
16.08	Demonstrate the principles of safe positioning and application of safety devices to ensure patient safety.
16.09	Demonstrate the selection of the appropriate solution and preparation of the operative site for the surgical procedure.
16.10	Perform steps for Foley catheter insertion and connection to drainage.
16.11	Describe the safe usage of critical instruments, equipment, and supplies utilized intraoperatively, including the electrosurgical unit, Lasers, Ultrasonic equipment, endoscopy equipment, robotics, insufflators, light sources, microscopes, power tools, suction, tourniquets, etc.
16.12	Demonstrate correctly the connection and operation of essential instruments, equipment, and supplies for the surgical procedure.
16.13	Demonstrate correct mathematical skills related to dosage available versus dosage needed when drawing up or administering medications.
16.14	Demonstrate knowledge of wound management techniques, including suturing techniques in the operating room, perioperative care of special needs patients, and perioperative assessment of the skin.
16.15	Demonstrate applicable wound management principles, including the placement and security of catheters, wound drainage systems, sterile dressings, and cast applications.
16.16	Discuss relevant and unique factors regarding postoperative care specific to the procedure.
17.0	Demonstrate knowledge of pharmacology and math calculation principles related to the surgical environment. The student will be able to:
17.01	Analyze the terminology and the basic concepts of pharmacology and drug administration, including pharmacokinetics and pharmacodynamics.
17.02	Describe pharmacological concepts relative to the administration of all anesthesia methods, agents, and techniques, including the role of the anesthetist, the first assistant, and the circulator during induction and extubation.
17.03	Analyze preoperative principles of patient assessment and how they relate to anesthesia.

17.04	Identify the classification, actions, effects, and precautions of common drugs used at the field within the surgical environment.
17.05	Apply knowledge of the pharmacologic agents used in the treatment of the surgical patient.
17.06	Describe potential anesthesia and operative complications and interventions for each.
17.07	Demonstrate the application of the Six Rights of Medication Administration.
17.08	Identify the correct medication form and method of application.
17.09	Demonstrate correct techniques for injection of local anesthetics.
17.10	Analyze and assemble correctly all medication supplies for each drug to be used on the sterile field.
17.11	Manage sterile solutions accurately within the sterile field.
17.12	Demonstrate the appropriate methods of transferring and accepting medications onto the sterile field.
17.13	Label properly all fluids and medications used within the sterile field.
17.14	Demonstrate the ability to correctly calculate common medication conversions and dosages.
17.15	Assess the risks and adverse effects of anesthesia, conscious sedation, local anesthesia agents, and pain management in the surgical setting.
17.16	Describe the function and its implications of anesthesia, conscious sedation, local anesthesia agents, and pain management as they relate to the preoperative patient.
17.17	Maintain accurate documentation of the amount of each medication and/or solution used at the field and notify the circulator as appropriate.
17.18	Explain the principles of local injection techniques and topical anesthetic agents.
18.0	Demonstrate knowledge of the basic surgical skills necessary to function safely and effectively. The student will be able to:
18.01	Demonstrate an understanding of advanced anatomy, physiology, disease processes, and the relationship of the processes to the specific types of pathologies according to body systems.
18.02	Correlate the preoperative diagnosis, diagnostic interventions, common complications, and operative pathophysiology relative to specific surgical procedures.
18.03	Correlate the preoperative diagnosis, operative anatomy, physiology and pathology, usual incision, wound closure techniques, medications utilized, common complications, and the usual sequence as related to specific surgical procedures.
18.04	Select and verify required instrumentation, equipment, and supplies, including any implants needed for specific surgical procedures using core knowledge and the applicable surgeon preference/procedure cards.
18.05	Demonstrate an understanding of diagnostic images as related to surgical anatomy.
18.06	Demonstrate application of aseptic and sterile technique principles, including the appropriate corrective action for common breaks in

	sterile technique that may occur.
18.07	Demonstrate the surgical scrub and donning of a sterile gown and gloves.
18.08	Demonstrate the principles of sterile draping.
18.09	Demonstrate assisted gowning/gloving for others.
18.10	Participate in the surgical time out to prevent wrong-site surgery and delays in the surgical procedure.
18.11	Select, prepare, pass, and utilize instruments, equipment, tissue replacement materials, implants, and supplies efficiently.
18.12	Monitor the surgical site regarding counted items, stage of surgery, tissue appearance, and patient's body fluids, e.g., blanching, desiccation, color of blood, blood loss, bile leaks, ascites, etc.
18.13	Demonstrate correctly the initiation and completion of counts regarding sponges, sharps, instruments, and miscellaneous items used within the patient's wound to prevent foreign body retention.
18.14	Describe the types of incisions, methods of wound closure, and mechanisms of wound management.
18.15	Describe the usual sequence of a common surgical procedure. (i.e., incision into the anatomy, dissection of the anatomy, operative steps of the procedure, and closing of the anatomy).
18.16	Selects the appropriate instrument, equipment, or supply for each step of the procedure.
18.17	Demonstrate ability to prepare, validate, handle, and preserve specimens accurately for laboratory analysis.
18.18	Demonstrates knowledge of and assists as needed with surgical procedures while functioning in the roles of scrub and assistant circulator.
18.19	Demonstrate effective perioperative case management, ensuring cost control and time/motion economy methods are utilized to maximize the efficiency of the OR team.
19.0	Demonstrate competencies in the components of the Surgical First Assistant related to knowledge and skills. The student will be able to:
19.01	Prioritize care or actions to be taken in a given circumstance to expedite the operative procedure or emergency situation.
19.02	Describe preoperative diagnosis, common complications, operative pathophysiology, and postoperative care related to the specific surgical procedures performed.
19.03	Analyze common patient assessments, including skin and chart review, relating relevant diagnostic and monitoring results to the surgeon as applicable to the surgical specialty.
19.04	Demonstrate preoperative preparation of the patient to facilitate proper patient care, including but not limited to positioning, application of tourniquet, surgical skin preparation, catheterization, draping, and sterile setup preparation.
19.05	Demonstrate and describe types of incisions and insertion of trocars.
19.06	Identify types of tissue, organs, and gross anatomical structures correctly during surgical procedures.

19.07	Demonstrate appropriate tissue handling techniques, including the care of the surgical specimens.
19.08	Provide appropriate exposure and visualization of the operative field for the surgeon.
19.09	Describe the appropriate sequence for common surgical procedures.
19.10	Utilize appropriate techniques to assist with hemostasis.
19.11	Demonstrate appropriate safe surgical techniques when the case involves either thermal, radiological, laparoscopic, environmental, or another known surgical hazard.
19.12	Participate in volume replacement or autotransfusion techniques and medication administration as appropriate.
19.13	Select appropriate instruments and supplies for the type of tissue.
19.14	Demonstrate competence with technology, the use of instruments, equipment, supplies, and medications for the surgical procedure.
19.15	Use surgical instruments skillfully in ways consistent with their design and purpose.
19.16	Utilize appropriate techniques to assist with the closure of body planes.
19.17	Select and apply appropriate wound dressings.
19.18	Assist the surgeon in securing drainage systems to tissue.
19.19	Evaluate the patient and report appropriately any abnormal condition found post-op related to positioning.
19.20	Assist the surgeon with postoperative care of the patient to facilitate proper patient care.
19.21	Demonstrate appropriate response to emergency situations, including respiratory/cardiac arrest situations, sudden hypoxia, hemorrhage, shock, surgical misadventures, contamination, perforation of viscus or cavity, critical equipment failure, and exposure, retraction, and compression injuries.
19.22	Facilitate the continuity of care within and across the healthcare settings to access available resources and services.
20.0	Demonstrate competencies in the components of the Surgical First Assistant related to legal and ethical responsibilities. The student will be able to:
20.01	State methods, standards, and aids that assist a surgical first assistant with interpreting and following legal responsibilities.
20.02	Describe the importance of maintaining credentials and following the appropriate credentialing policy in accordance with hospital policy and appropriate laws and regulations.
20.03	Explain the scope of practice for the surgical first assistant.
20.04	Describe the key elements related to the development of a surgical conscience.

20.05	Explain the purpose of Florida's "Right to Know" law and its provisions.
20.06	Demonstrate an understanding of the legal, ethical, moral, and professional responsibilities of working as a surgical assistant and the professional skills necessary to fulfill the role.
20.07	Provide health care within the ethical/legal framework of the job description, including role responsibilities and limitations.
20.08	Describe the principles of problem solving and confidentiality in ethical decision making and risk management.
20.09	Define current strategies that promote patient safety and continuous improvement (i.e., Six Sigma and Lean Management).

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools, and equipment, as well as experimental, quality, and safety procedures, are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate, and troubleshoot equipment/tools used to make observations. Students understand measurement error and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

In a simulated surgical environment, students practice preparing, setting up, and maintaining a sterile field, sterilization and disinfection procedures, preparation of supplies and equipment for surgery, and patient preparation.

Clinical learning experiences in an operating room and related areas are an integral part of this program.

The Human Patient Simulator (HPS) or other accepted simulation scenarios may be used for a limited number of clinical hours. A low teacher-student ratio in the lab and clinical area is strongly recommended. The recommended maximum ratio is 1:8.

Special Notes

This program focuses on broad, transferable skills and stresses understanding and demonstration of the following elements of the health care industry: planning, management, finance, technical and production skills, underlying principles of technology, labor issues, community issues and health, safety, and environmental issues.

This program meets the Department of Health's education requirements for HIV/AIDS, Domestic Violence, and Prevention of Medical Errors. Although not a requirement for initial licensure, it is a requirement for renewal, therefore, the instructor **may** provide a certificate for renewal purposes to the student verifying these requirements have been met.

If students in this program are seeking a licensure, certificate, or registration through the Department of Health, please refer to 456.0635, F.S. for more information on disqualification for a license, certificate, or registration through the Department of Health.

In accordance with Rule 6A-10.024, F.A.C., all faculty providing instruction must have at least a baccalaureate degree or an associate degree with demonstrated competencies in the specific instructional program as defined by the Southern Association of Colleges and Schools.

The Surgical First Assistant Core Curriculum should be taught by qualified staff as outlined in the most recent approved CAAHEP (Commission on Accreditation on Allied Health Education Programs) accreditation standards and guidelines.

Entering students who have successfully completed the program 0351090905 or 0351090904, Surgical Technology, or are currently Nationally Certified as a CST (Certified Surgical Technologist) or SA-C (Surgical Assistant-Certified) should be given appropriate advanced standing.

After successful completion of an approved and accredited surgical first assistant program, students are eligible to take the National Board of Surgical Technology and Surgical Assisting First Assistant exam as approved.

The CORE should be taken first in the program. Following the successful completion of the core, the student is eligible to take the National Health Care Foundation Skill Standards Assessment with instructor approval and the completion of a portfolio.

Career and Technical Student Organization (CTSO)

CTSOs are co-curricular career and technical student organizations providing leadership training and reinforcing specific career and technical skills. Career and Technical Student Organizations provide activities for students as an integral part of the instruction offered. Other CTSOs not listed in this curriculum framework or recognized by the Florida Department of Education are permissible provided they support student mastery over the standards and benchmarks of this curriculum framework.

Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology, and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

Florida Department of Education
Curriculum Framework

The standards and benchmarks for this program were updated for the 2026-27 academic year.

Program Title: **Endoscopic Technician**
Career Cluster: **Health Science**

College Credit Certificate	
CIP Number	0351099902
Program Type	College Credit Certificate (CCC)
Program Length	24 credit hours
CTSO	HOSA
SOC Codes (all applicable)	For program SOC codes, please see the Program and Course Tables section of the CTE Program Resources page linked below.
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml

Purpose

This certificate program is part of the Surgical Services AS degree program (1351090901).

A College Credit Certificate consists of a program of instruction of less than sixty (60) credits of college-level courses, which is part of an AS or AAS degree program and prepares students for entry into employment (Rule 6A-14.030, F.A.C.).

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Health Science career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of Health Science career cluster.

The program is designed to prepare students for employment as Endoscopic Technicians.

The content includes but is not limited to communication and interpersonal skills, legal and ethical responsibilities, anatomy, physiology, pathophysiology, microbiology, aseptic techniques, patient care endoscopy procedures, endoscopy procedures, patient safety, use and care of equipment and supplies, CPR, Heart saver, employability skills, basic computer literacy and endoscopic technician duties such as disinfection and processing endoscopic instruments, completing the setup and assisting during the endoscopy procedures, assisting with patient positioning and splinting as indicated, transportation of patients, and manage the endoscopy accessories, related supplies and equipment.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Program Structure

When developing the course sequence for the local implementation of this program, select courses that:

- Meet the skill development requirements of the standards and benchmarks of this program.
- Where reasonable and practicable, align with programs offered by your institution or other postsecondary institutions in Florida, including:
    - Related AS and AAS degrees.
    - Baccalaureate degrees within the same career pathway and/or Federal CIP code.

Visit FloridaShines' Discover Programs website to identify other institutions that offer similar programs to review their course sequencing. Where appropriate, course alignment between institutions offering related programs can facilitate interagency student articulation.

Visit FloridaShines' Common Prerequisites Manual to identify courses that are prerequisites for admission into an upper division program. When sub-baccalaureate courses are aligned to the course admissions requirements of baccalaureate programs with the same career pathway, students can enter upper division coursework seamlessly.

Florida's Career Readiness Skills for CTE Programs

Employability Skills	
01.0	Apply academic skills to workplace scenarios.
01.01	Use reading skills.
01.02	Use writing skills.
01.03	Use mathematical strategies and procedures.
01.04	Use scientific principles and procedures.
02.0	Design a solution to an industry problem.
02.01	Use critical thinking.
02.02	Use creativity.
02.03	Make sound decisions.
02.04	Solve problems.
02.05	Reason.
02.06	Plan and organize.
03.0	Manage resources within an industry project
03.01	Manage time.
03.02	Manage money or resources.
03.03	Manage materials.
03.04	Manage personnel.
04.0	Oversee the subcomponents, operations and output of a technical or organizational system.
04.01	Manage systems.
04.02	Monitor systems.
04.03	Improve systems.
05.0	Use information for decision making.
05.01	Locate information.
05.02	Organize information.
05.03	Use information.

	05.04 Analyze information.
	05.05 Communicate information.
06.0	Apply relevant technology to workplace scenarios to aid productivity.
	06.01 Use technology.
07.0	Interpret and express interpersonal communication.
	07.01 Communicate verbally.
	07.02 Listen actively.
	07.03 Comprehend written material.
	07.04 Convey information in writing.
	07.05 Communicate nonverbally.
	07.06 Interpret nonverbal communication.
08.0	Interact with others to accomplish workplace goals.
	08.01 Collaborate with others in a team.
	08.02 Respond to customer needs.
	08.03 Exercise leadership.
	08.04 Negotiate to resolve conflict.
	08.05 Respect others.
09.0	Manage personal behavior to maximize productivity and professional growth.
	09.01 Demonstrate responsibility and self-discipline.
	09.02 Adapt and show flexibility.
	09.03 Work independently.
	09.04 Demonstrate a willingness to learn.
	09.05 Demonstrate integrity.
	09.06 Demonstrate professionalism.
	09.07 Take initiative.
	09.08 Display positive attitude.
	09.09 Take responsibility for professional growth.

Job Attainment	
10.0	Find, assess and apply to job opportunities.
10.01	Identify online job posts relevant to his or her career aspirations.
10.02	Compare and contrast the job posts' required qualifications, job duties, compensation, benefits and employers.
10.03	Define what information, documentation and writing prompts are required for the positions.
11.0	Communicate personal competence, character and fit for a job opportunity.
11.01	Develop a resume.
11.02	Write a cover letter.
11.03	Curate a professional portfolio that includes work products.
11.04	Prepare for and experience a mock job interview.
12.0	Cultivate and leverage relationships to professionally advance.
12.01	Request a signed reference letter, letter of recommendation and/or an online skill/professionalism endorsement.
12.02	Develop a plan to cultivate a professional digital footprint.
12.03	Develop a networking plan for a specific industry of interest.

Standards

After successfully completing this program, the student will be able to perform the following:

01.0 Demonstrate knowledge of the health care delivery system and health occupations.
02.0 Demonstrate the ability to communicate and use interpersonal skills effectively.
03.0 Demonstrate legal and ethical responsibilities.
04.0 Demonstrate an understanding of and apply wellness and disease concepts.
05.0 Recognize and practice safety and security procedures.
06.0 Recognize and respond to emergency situations.
07.0 Recognize and practice infection control procedures.
08.0 Demonstrate an understanding of information technology applications in healthcare.
09.0 Demonstrate employability skills.
10.0 Demonstrate knowledge of blood-borne diseases, including HIV/AIDS.
11.0 Apply basic math and science skills.
12.0 Demonstrate language arts knowledge and skills.
13.0 Solve problems using critical thinking skills, creativity, and innovation.
14.0 Describe the roles within teams, work units, departments, organizations, inter-organizational systems, and the larger environment.
15.0 Demonstrate leadership and teamwork skills needed to accomplish team goals and objectives.
16.0 Demonstrate endoscopic technician skills.
17.0 Demonstrate competencies in the components of the endoscopic technician related to communication and interpersonal skills.
18.0 Demonstrate an understanding of the basic sciences related to endoscopy.
19.0 Describe and practice safety measures in the endoscopic environment.
20.0 Perform patient care endoscopic procedures related to the endoscopic environment and describe methods for meeting patients' needs.
21.0 Demonstrate knowledge of the basic endoscopy skills necessary to function safely and effectively.
22.0 Demonstrate competencies in the components of the endoscopic technician related to knowledge and skills.
23.0 Demonstrate competencies in the components of the endoscopic technician related to legal and ethical responsibilities.

Florida Department of Education
Student Performance Standards

Program Title: **Endoscopic Technician**
CIP Number: **0351099902**
Program Length: **24 credit hours**

Standards 1-11 are referred to as the **Health Science Core** and are required standards in this program. Secondary and Postsecondary students completing the health science core will not have to repeat the core in any other health science program in which it is a part. When the recommended sequence is followed, the structure allows students to complete at specified points for employment or remain for advanced training or cross-training.

To ensure consistency whenever these courses are offered, the health science core standards (1-11) and benchmarks have been placed in a separate document. To access this document, visit this link:
https://www.fldoe.org/core/fileparse.php/20569/urlt/health-sci-core-psav-cc-2324.rtf

This certificate program is part of the Surgical Services AS degree program (1351090901). At the completion of this program, the student will be able to:	
Students completing intended outcomes 12-23, in addition to the health careers core, will meet the requirements of the Endoscopic Technician CCC.	
12.0	Demonstrate language arts knowledge and skills. The student will be able to:
	12.01 Locate, comprehend, and evaluate key elements of oral and written information.
	12.02 Draft, revise, and edit written documents using correct grammar, punctuation, and vocabulary.
	12.03 Present information formally and informally for specific purposes and audiences.
13.0	Solve problems using critical thinking skills, creativity, and innovation. The student will be able to:
	13.01 Employ critical thinking skills independently and in teams to solve problems and make decisions.
	13.02 Employ critical thinking and interpersonal skills to resolve conflicts.
	13.03 Identify and document workplace performance goals and monitor progress toward those goals.
	13.04 Conduct technical research to gather information necessary for decision-making.
14.0	Describe the roles within teams, work units, departments, organizations, inter-organizational systems, and the larger environment. The student will be able to:
	14.01 Describe the nature and types of healthcare organizations.

	14.02 Describe the effect of key organizational systems on performance and quality.
	14.03 List and describe quality control systems and/or practices common to the workplace.
	14.04 Describe the impact of the global economy on healthcare organizations.
15.0	Demonstrate leadership and teamwork skills needed to accomplish team goals and objectives. The student will be able to:
	15.01 Employ leadership skills to accomplish organizational goals and objectives.
	15.02 Establish and maintain effective working relationships to accomplish objectives and tasks.
	15.03 Conduct and participate in meetings to accomplish work tasks.
	15.04 Employ mentoring skills to inspire and teach others.
	15.05 Analyze attributes and attitudes of an effective leader.
	15.06 Recognize factors and situations that may lead to conflict.
	15.07 Demonstrate effective techniques for managing team conflict.
	15.08 Demonstrate an understanding of the importance of effective interdepartmental relationships.
16.0	Demonstrate endoscopic technician skills. The student will be able to:
	16.01 Apply the principles of medical and sterile asepsis to the processing and use of instruments, equipment, and supplies.
	16.02 Apply infection control techniques following the Centers for Disease Control (CDC) guidelines.
	16.03 Inspect equipment and supplies for condition and quality.
	16.04 Identify principles and demonstrate techniques of achieving disinfection and sterilization.
	16.05 Decontaminate instruments, equipment, and environment.
	16.06 Demonstrate the ability to identify, correct, and report on sterile packaging integrity.
	16.07 Restock supplies and equipment.
	16.08 Identify instruments, equipment, and supplies for endoscopic procedures.
	16.09 Demonstrate the ability to label and package materials as required.
	16.10 Demonstrate supply storage methods for instruments and equipment.

17.0	Demonstrate competencies in the components of the endoscopic technician related to communication and interpersonal skills. The student will be able to:
17.01	Use various forms of communication in the role of an endoscopic technician to communicate relevant, accurate, and complete information in a concise and clear manner.
17.02	Collaborate with the patient, physician, and other members of the healthcare team to assess, plan, implement, and evaluate the patient's endoscopy care to promote positive outcomes.
17.03	Demonstrate proper use of communication technology, including, but not limited to, intercoms, computers, written documentation logs, and paging systems.
17.04	Demonstrate patient interviewing techniques.
17.05	Facilitate teamwork as a patient advocate and assistant to the physician.
17.06	Demonstrate competency regarding reporting and documentation responsibilities.
18.0	Demonstrate an understanding of the basic sciences related to endoscopy. The student will be able to:
18.01	Apply knowledge of the microbial environment to the care of the patient.
18.02	Relate anatomy, physiology, and pathophysiology to endoscopic procedures.
18.03	Apply the principles of medical and surgical asepsis to endoscopic procedures being performed.
18.04	Discuss electricity, computers, and robotics as they relate to endoscopic procedures.
19.0	Describe and practice safety measures in the endoscopic environment. The student will be able to:
19.01	Inspect equipment and supplies for condition and quality.
19.02	Implement appropriate patient safety goals in compliance with hospital policy.
19.03	Apply knowledge of endoscopic hazards for patient safety.
20.0	Perform patient care endoscopic procedures related to the endoscopic environment and describe methods for meeting patients' needs. The student will be able to:
20.01	Perform safe patient transfer and transportation techniques used within the endoscopy unit.
20.02	Apply the principles of safe usage of the electrosurgical unit, laser, endoscopes, and other equipment.
20.03	Identify the roles of the endoscopic team members during each phase of the endoscopic procedure.
20.04	Describe the principles of positioning, draping the patient, passing instruments, monitoring the field, and manipulating the scope.
20.05	Describe the perioperative techniques, methods, and management of anesthesia related to the type of endoscopy procedure.

	20.06 Apply knowledge of endoscopic techniques, such as assisting with proper specimen handling methods.
21.0	Demonstrate knowledge of the basic endoscopy skills necessary to function safely and effectively. The student will be able to:
	21.01 Demonstrate an understanding of the gastrointestinal system, respiratory system, and stages of disease.
	21.02 Select instruments, equipment, and supplies for endoscopic procedures using physician preference/procedure cards.
	21.03 Demonstrate the ability to prepare and/or update physician preference cards.
	21.04 Differentiate appropriate use of medical sterile technique regarding the donning of sterile gloves and the use of instruments, supplies, and equipment.
22.0	Demonstrate competencies in the components of the endoscopic technician related to knowledge and skills. The student will be able to:
	22.01 Prioritize patient care in any given circumstance to expedite the procedure.
	22.02 Describe preoperative diagnosis and complications related to the specific endoscopic procedures.
	22.03 Describe and apply patient diagnostic and monitoring devices as applicable to the endoscopy specialty.
	22.04 Assist the surgical team with preoperative preparation of the patient to facilitate proper patient care, including, but not limited to, positioning, draping, and setup preparation.
	22.05 Identify anatomical structures correctly during endoscopy procedures.
	22.06 Demonstrate appropriate tissue handling techniques, including the care of the endoscopic specimens.
	22.07 Describe the appropriate sequence for endoscopic procedures.
	22.08 Utilize appropriate techniques to assist with facilitating visualization.
	22.09 Demonstrate appropriate safe endoscopic techniques when the case involves either thermal, radiological, laparoscopic, environmental, or other known endoscopy hazards.
	22.10 Demonstrate competence of the appropriate usage of endoscopic instruments, equipment, and supplies.
	22.11 Assist the surgical team with postoperative care of the patient.
	22.12 Demonstrate appropriate response to emergency situations, including respiratory/cardiac arrest situations, sudden hypoxia, hemorrhage, shock, endoscopy misadventures, contamination, perforation of viscus or cavity, critical equipment failure, and injury.
23.0	Demonstrate competencies in the components of the endoscopic technician related to legal and ethical responsibilities. The student will be able to:
	23.01 State methods, standards, and aids that assist an endoscopic technician with interpreting and following legal responsibilities.
	23.02 Explain the job requirements of an endoscopic technician.

23.03	Demonstrate an understanding of the legal, ethical, moral, and professional responsibilities of working as an endoscopic technician and the professional skills necessary to fulfill the role.
23.04	Provide health care within the ethical/legal framework of the endoscopic technician's job description, including role responsibilities and limitations.

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools, and equipment, as well as experimental, quality, and safety procedures, are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate, and troubleshoot equipment/tools used to make observations. Students understand measurement error and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

The Human Patient Simulator (HPS) or other accepted simulation scenarios may be used for a limited number of clinical hours. A low teacher-student ratio in the lab and clinical area is strongly recommended. The recommended maximum ratio is 1:8.

Special Notes

This program focuses on broad, transferable skills and stresses understanding and demonstration of the following elements of the health care industry: planning, management, finance, technical and production skills, underlying principles of technology, labor issues, community issues, and health, safety, and environmental issues.

This program meets the Department of Health's education requirements for HIV/AIDS, Domestic Violence, and Prevention of Medical Errors. Although not a requirement for initial licensure, it is a requirement for renewal, therefore, the instructor **may** provide a certificate for renewal purposes to the student verifying these requirements have been met.

If students in this program are seeking a licensure, certificate, or registration through the Department of Health, please refer to 456.0635, F.S., for more information on disqualification for a license, certificate, or registration through the Department of Health.

The Endoscopy Technician Core Curriculum should be taught by qualified staff, including but not limited to physicians, registered nurses, certified endoscopic technicians, and experienced endoscopic technicians.

Entering students who have successfully completed the program, Nursing Assistant, or currently Nationally Certified as a CNA (Certified Nursing Assistant), should be given appropriate advanced standing.

The CORE should be taken first in the program. Following the successful completion of the core, the student is eligible to take the National Health Care Foundation Skill Standards Assessment with instructor approval and the completion of a portfolio.

Career and Technical Student Organization (CTSO)

CTSOs are co-curricular career and technical student organizations providing leadership training and reinforcing specific career and technical skills. Career and Technical Student Organizations provide activities for students as an integral part of the instruction offered. Other CTSOs not listed in

this curriculum framework or recognized by the Florida Department of Education are permissible provided they support student mastery over the standards and benchmarks of this curriculum framework.

Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

Florida Department of Education
Curriculum Framework

The standards and benchmarks for this program were updated for the 2026-27 academic year.

Program Title: **Medical Clinical Laboratory Technician**
Program Type: **ATD (Applied Technology Diploma)**
Career Cluster: **Health Science**

	College Credit	Clock Hour
Program Number	N/A	H170600
CIP Number	0351100401	0351100404
Grade Level	Applied Technology Diploma (ATD)	30, 31
Program Length	40 credit hours	1515 clock hours
CTSO	HOSA	HOSA
SOC Codes (all applicable)	For program SOC codes, please see the Program and Course Tables section of the CTE Program Resources page linked below.	
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml	
Basic Skills Level:	N/A	N/A

Purpose

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Health Science career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of Health Science career cluster.

The content includes but is not limited to didactic and laboratory performance of routine procedures in hematology, immunology, urinalysis, immunohematology, microbiology, and clinical chemistry, including the use of common laboratory instruments. A clinical component is a necessary element of this program.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Program Structure

This program is an Applied Technology Diploma (ATD) program that is part of a technical degree program, is less than 60 credit hours, and leads to employment in a specific occupation. An ATD program may consist of either technical credit or college credit. A public school district may offer an ATD program only as clock hour credit, with college credit awarded to a student upon articulation to a state college.

When developing the course sequence for the local implementation of this program, select courses that:

- Meet the skill development requirements of the standards and benchmarks of this program.
- Where reasonable and practicable, align with programs offered by your institution or other postsecondary institutions in Florida, including:
  - Related AS and AAS degrees.
  - Baccalaureate degrees within the same career pathway and/or Federal CIP code.

Visit FloridaShines' Discover Programs website to identify other institutions that offer similar programs to review their course sequencing. Where appropriate, course alignment between institutions offering related programs can facilitate interagency student articulation.

Visit FloridaShines' Common Prerequisites Manual to identify courses that are prerequisites for admission into an upper division program. When sub-baccalaureate courses are aligned to the course admissions requirements of baccalaureate programs with the same career pathway, students can enter upper division coursework seamlessly.

Clock Hour Program

When offered at the district level, this program is a planned sequence of instruction consisting of 3 occupational completion points and the courses as shown below.

OCP	Course Number	Course Title	Length
A	HSC0003	Basic Healthcare Worker	90 hours
B	MEA0520	Phlebotomist	75 hours
C	MLT0009	Introduction to Medical Laboratory Technology	90 hours
	MLT0220	Urinalysis and Body Fluids	135 hours
	MLT0335	Hematology and Hemostasis	280 hours
	MLT0505	Immunology	60 hours
	MLT0640	Clinical Chemistry	255 hours
	MLT0520	Immunohematology	255 hours
	MLT0450	Microbiology and Parasitology	275 hours

College Credit Program

When offered at the college credit level, this ATD program is part of the Medical Laboratory Technology AS program (1351100405) and has a program length of 40 credits.

Regulated Programs

This program is regulated by the Florida Board of Clinical Laboratory Personnel: http://floridasclinicallabs.gov/

Florida's Career Readiness Skills for CTE Programs

Employability Skills	
01.0	Apply academic skills to workplace scenarios.
	01.01 Use reading skills.
	01.02 Use writing skills.
	01.03 Use mathematical strategies and procedures.
	01.04 Use scientific principles and procedures.
02.0	Design a solution to an industry problem.
	02.01 Use critical thinking.
	02.02 Use creativity.
	02.03 Make sound decisions.
	02.04 Solve problems.
	02.05 Reason.
	02.06 Plan and organize.
03.0	Manage resources within an industry project
	03.01 Manage time.
	03.02 Manage money or resources.
	03.03 Manage materials.
	03.04 Manage personnel.
04.0	Oversee the subcomponents, operations and output of a technical or organizational system.
	04.01 Manage systems.
	04.02 Monitor systems.
	04.03 Improve systems.
05.0	Use information for decision making.
	05.01 Locate information.
	05.02 Organize information.

	05.03 Use information.
	05.04 Analyze information.
	05.05 Communicate information.
06.0	Apply relevant technology to workplace scenarios to aid productivity.
	06.01 Use technology.
07.0	Interpret and express interpersonal communication.
	07.01 Communicate verbally.
	07.02 Listen actively.
	07.03 Comprehend written material.
	07.04 Convey information in writing.
	07.05 Communicate nonverbally.
	07.06 Interpret nonverbal communication.
08.0	Interact with others to accomplish workplace goals.
	08.01 Collaborate with others in a team.
	08.02 Respond to customer needs.
	08.03 Exercise leadership.
	08.04 Negotiate to resolve conflict.
	08.05 Respect others.
09.0	Manage personal behavior to maximize productivity and professional growth.
	09.01 Demonstrate responsibility and self-discipline.
	09.02 Adapt and show flexibility.
	09.03 Work independently.
	09.04 Demonstrate a willingness to learn.
	09.05 Demonstrate integrity.
	09.06 Demonstrate professionalism.
	09.07 Take initiative.
	09.08 Display positive attitude.

	09.09 Take responsibility for professional growth.
Job Attainment	
10.0	Find, assess and apply to job opportunities.
	10.01 Identify online job posts relevant to his or her career aspirations.
	10.02 Compare and contrast the job posts' required qualifications, job duties, compensation, benefits and employers.
	10.03 Define what information, documentation and writing prompts are required for the positions.
11.0	Communicate personal competence, character and fit for a job opportunity.
	11.01 Develop a resume.
	11.02 Write a cover letter.
	11.03 Curate a professional portfolio that includes work products.
	11.04 Prepare for and experience a mock job interview.
12.0	Cultivate and leverage relationships to professionally advance.
	12.01 Request a signed reference letter, letter of recommendation and/or an online skill/professionalism endorsement.
	12.02 Develop a plan to cultivate a professional digital footprint.
	12.03 Develop a networking plan for a specific industry of interest.

Standards

After successfully completing this program, the student will be able to perform the following:

01.0 Demonstrate knowledge of the healthcare delivery system and health occupations.
02.0 Demonstrate the ability to communicate and use interpersonal skills effectively.
03.0 Demonstrate legal and ethical responsibilities.
04.0 Demonstrate an understanding of and apply wellness and disease concepts.
05.0 Recognize and practice safety and security procedures.
06.0 Recognize and respond to emergency situations.
07.0 Recognize and practice infection control procedures.
08.0 Demonstrate an understanding of information technology applications in healthcare.
09.0 Demonstrate employability skills.
10.0 Demonstrate knowledge of bloodborne diseases, including HIV/AIDS.
11.0 Apply basic math and science skills.
12.0 Demonstrate accepted professional, communication, and interpersonal skills.
13.0 Discuss phlebotomy in relation to the healthcare setting.
14.0 Identify the anatomic structure and function of body systems in relation to services performed by the phlebotomist.
15.0 Recognize and identify collection reagents supplies, equipment, and interfering chemical substances.
16.0 Demonstrate skills and knowledge necessary to perform phlebotomy.
17.0 Practice infection control following standard precautions.
18.0 Practice accepted procedures of transporting, accessioning, and processing specimens.
19.0 Practice quality assurance and safety.
20.0 Demonstrate knowledge and use of basic laboratory equipment and techniques.
21.0 Demonstrate basic knowledge of and perform clinical laboratory Point of Care (POC) testing (Waived).
22.0 Demonstrate basic knowledge of and perform Point-of-Care (POC) Testing using CLIA-approved waived instrumentation.
23.0 Discuss the general responsibilities and functions encountered by a medical laboratory technician.
24.0 Apply quality assurance principles and protocols for laboratory equipment.
25.0 Demonstrate knowledge of the operation of computer systems.
26.0 Demonstrate an understanding of the basic principles of molecular diagnostics.
27.0 Demonstrate knowledge of urinalysis and body fluids principles and procedures.
28.0 Demonstrate knowledge of hematological principles and procedures.
29.0 Demonstrate knowledge of hemostasis and related diagnostic principles and procedures.
30.0 Demonstrate knowledge of immunology principles and procedures.
31.0 Demonstrate knowledge of clinical chemistry principles and procedures.
32.0 Demonstrate knowledge of immunohematology principles and procedures.
33.0 Demonstrate knowledge of microbiological principles and procedures.

Florida Department of Education
Student Performance Standards

Program Title: **Medical Clinical Laboratory Technician-ATD**
Clock Hour Program Number: **H170600**

When this program is offered at the district level, the following organization of courses, standards, and benchmarks apply.

The **Basic Health Care Worker (HSC0003)** is referred to as the **Health Science Core** and is the first OCP in the majority of the Clock Hour Program health science programs. Secondary and Postsecondary students completing the health science core will not have to repeat the core in any other health science program in which it is a part. When the recommended sequence is followed, the structure allows students to complete at specified points for employment or remain for advanced training or cross-training.

Course Number: HSC0003
Occupational Completion Point: A
Basic Healthcare Worker – 90 Hours

To ensure consistency whenever these courses are offered, the health science core standards (1-11) and benchmarks have been placed in a separate document. To access this document, visit this link:
https://www.fldoe.org/core/fileparse.php/20569/urlt/health-sci-core-psav-cc-2324.rtf

Course Number: MEA0520
Occupational Completion Point: B
Phlebotomist – 75 Hours

12.0		Demonstrate accepted professional, communication, and interpersonal skills. The student will be able to:
	12.01	Demonstrate the appropriate professional behavior of a phlebotomist and describe the scope of practice (job skills and duties) for a phlebotomist.
	12.02	Explain to the patient the procedure to be used in specimen collection.
	12.03	Explain in detail the importance of identifying patients correctly when drawing blood.
	12.04	Explain the importance of continuing education in relation to certification to maintain competency and skills.
13.0		Discuss phlebotomy in relation to the healthcare setting. The student will be able to:
	13.01	List, classify, and discuss various departments and services within the health care setting in which the phlebotomist must interact with to obtain laboratory specimens from patients.
	13.02	Identify the major departments/sections with the clinical laboratory, the major types of procedures run in each department/section, and their specimen requirements.

	13.03 Describe roles of the major classifications of clinical laboratory personnel (i.e., pathologist, chief/administrative technologist, CLS, MLS, MLT, MT, phlebotomist, lab assistant, etc.).
14.0	Identify the anatomic structure and function of body systems in relation to services performed by the phlebotomist. The student will be able to:
	14.01 Describe and define major body systems with emphasis on the circulatory system.
	14.02 List and describe the main superficial veins used in performing venipuncture.
	14.03 Locate the most appropriate sites(s) for capillary and venipuncture.
	14.04 Describe the function of the following blood components: erythrocytes, thrombocytes, leukocytes, and plasma.
	14.05 Compare and contrast serum and plasma as they relate to blood collection.
	14.06 Discuss hemostasis, hemolysis, and methods of prevention as they relate to blood collection.
15.0	Recognize and identify collection reagents supplies, equipment, and interfering chemical substances. The student will be able to:
	15.01 Identify and discuss proper use of appropriate types of equipment needed to collect various clinical laboratory blood specimens by venipuncture.
	15.02 Explain the special precautions and types of equipment needed to collect blood from the pediatric patient.
	15.03 Identify and discuss proper use of supplies used in collecting short-draw specimens or difficult draws.
	15.04 Identify and discuss the proper use of the various types of anticoagulants, preservatives, and gels used in blood collection and the vacuum tube color-codes for these additives.
	15.05 Describe the types of specimens that are analyzed in the clinical laboratory and the phlebotomist's role in collecting and/or transporting these specimens to the laboratory.
	15.06 Describe substances potentially encountered during phlebotomy that can interfere in the analysis of blood constituents.
	15.07 Define and utilize correct medical terminology and metric measurement needed for specimen collection.
16.0	Demonstrate skills and knowledge necessary to perform phlebotomy. The student will be able to:
	16.01 Follow approved procedure for completing a laboratory requisition form and recognize a properly completed form.
	16.02 Demonstrate knowledge of established protocol for patient and specimen identification.
	16.03 Discuss appropriate methods for facilitating and preparing the patient for capillary and venipuncture collection.
	16.04 List appropriate antiseptic agents useful in preparing sites for capillary and venipuncture for adult and pediatric patients.
	16.05 Perform venipuncture by evacuated tube, butterfly, and syringe systems, demonstrating appropriate use of supplies, proper handling of equipment and specimens, and appropriate patient care.

	16.06 Describe the correct order of draw.
	16.07 Describe the use of barcoding systems used for specimen identification.
	16.08 Convey an understanding of capillary puncture using appropriate supplies and techniques for adult and pediatric patients.
	16.09 Describe the most common complications associated with capillary and venipuncture, their causes, prevention, and treatment.
	16.10 Recognize and respond to possible adverse patient reactions such as allergies, convulsions, syncope, lightheadedness, vomiting, and nerve involvement.
	16.11 Perform appropriate procedures for disposing of used or contaminated capillary and venipuncture supplies.
	16.12 Perform appropriate techniques for making a peripheral blood smear for hematologic evaluation.
	16.13 Demonstrate the proper procedure for collecting blood cultures.
	16.14 Demonstrate a working understanding of how the age and weight of patients impact the maximum amount of blood that can be safely drawn.
17.0	Practice infection control following standard precautions. The student will be able to:
	17.01 Define the term “hospital-acquired infection.”
	17.02 Demonstrate and practice procedures for infection prevention, including hand washing skills.
	17.03 Discuss transmission-based precautions.
	17.04 Identify potential routes of infection and their complications.
18.0	Practice accepted procedures of transporting, accessioning, and processing specimens. The student will be able to:
	18.01 Instruct patients in the proper collection of urine (clean catch, mid-stream), sputum, and stool samples.
	18.02 Follow the approved procedure for preparation and processing (e.g., centrifugation, separation, aliquoting, labeling, and storage) of serum, plasma, urine, sputum, stool, and wound culture specimens.
	18.03 Describe the importance of time considerations for specimen collection, transporting, and delivery.
	18.04 Describe routine procedures for transporting and processing specimens, including DOT packaging requirements.
19.0	Practice quality assurance and safety. The student will be able to:
	19.01 Distinguish and perform procedures that ensure the reliability of test results when collecting blood specimens.
	19.02 Practice appropriate patient safety.

19.03	Practice safety in accordance with OSHA (State & Federal guidelines) for chemical, biological, and PPE established procedures, including proper disposal of sharps and biohazardous materials.
19.04	Follow documentation procedures for work-related accidents.
19.05	Implement appropriate Joint Commission patient safety goals and other accrediting/regulatory agency guidelines.

Course Number: MLT0009 Occupational Completion Point: C Introduction to Medical Laboratory Technology – 90 Hours	
20.0	Demonstrate knowledge and use of basic laboratory equipment and techniques. The student will be able to:
20.01	Identify the parts of the microscope and explain the function of each.
20.02	Demonstrate the proper technique for use of the microscope.
20.03	Demonstrate use of standard laboratory equipment, including pipetting skills and preventative maintenance.
20.04	Perform basic laboratory math calculations, including serial dilutions and making solutions.
20.05	Understand the principles of quality assurance to correct problems encountered in monitoring daily quality control.
20.06	Evaluate laboratory findings to confirm results according to standard operating procedure and best laboratory practices.
20.07	Demonstrate knowledge of principles and operation of basic laboratory instruments.
21.0	Demonstrate basic knowledge of and perform clinical laboratory Point-of-Care (POC) testing (Waived). The student will be able to:
21.01	Demonstrate the ability to interpret instructions of point-of-care testing, including, but not limited to, the following: • Test principle • Storage and Stability • Internal vs. External Quality Control • Specimen collection and preparation • Directions for use • Interpretation of results • Interfering substances
21.02	Demonstrate and discuss knowledge of lot numbers use and importance regarding both kits and reagents.
21.02	Demonstrate knowledge of the frequency in performing quality control procedures.
21.02	Understand the Clinical Laboratory Improvement Amendments (CLIA 88) classification of laboratory testing into waived, moderate, and highly complex, including the personnel qualified to perform each.

22.0	Demonstrate basic knowledge of and perform Point-of-Care (POC) Testing using CLIA-approved waived instrumentation. The student will be able to:
22.01	Demonstrate and perform POC testing specific to microbiology, hematology, urinalysis, and clinical chemistry.
22.02	Perform instrument maintenance.
22.03	Demonstrate knowledge of quality control and calibrations involved with the POC instruments.
22.04	Identify normal limits and associate abnormal results with disease or disorders.
22.05	Discuss the significance of reporting critical values as it applies to POC testing as soon as possible.
23.0	Discuss the general responsibilities and functions encountered by a medical laboratory technician. The students will be able to:
23.01	Ask appropriate scientific questions and recognize what is involved in experimental approaches to the solutions of such questions.
23.02	Communicate laboratory results to healthcare professionals.
23.03	Demonstrate ability to evaluate laboratory results under the supervision of a medical laboratory scientist.
23.04	Demonstrate ability to report laboratory results in written or oral form under the supervision of a medical laboratory scientist.
23.05	List licensure and certification requirements of the major classifications of clinical laboratory personnel.
24.0	Apply quality assurance principles and protocols for laboratory equipment. The student will be able to:
24.01	Assess specimen acceptability using standard operating procedure, including rejection/recollection criteria.
24.02	Describe procedures for transporting and processing specimens.
24.03	Describe the clinical laboratory role in providing quality assurance in laboratory testing, reporting, and use and maintenance of equipment.
24.04	Understand the need for calibration of laboratory equipment.
24.05	Demonstrate and record quality control procedures required for the tests performed and recognize unacceptable results.
24.06	Report identified problems encountered in daily quality control according to standard operating procedures.
24.07	Comply with current Occupational Safety and Health Administration (OSHA) regulations regarding laboratory hazards.
25.0	Demonstrate knowledge of the operation of computer systems. The student will be able to:
25.01	Discuss the role of computer systems in laboratory data management.

	25.02 Demonstrate knowledge of common computer terminology.
	25.03 Demonstrate entry-level computer operations for specimen accessioning, data reporting, and quality control recording.
	25.04 Demonstrate entry-level operational skills in the use of computer-interfaced analytical instrumentation.
26.0	Demonstrate an understanding of the basic principles of molecular diagnostics. The student will be able to:
	26.01 Discuss the principles and major steps of the polymerase chain reaction (PCR).
	26.02 Discuss the structure, function, and components of DNA and RNA.
	26.03 Define the key terms of molecular diagnostics.
	26.04 List and describe the principles of DNA, RNA, and molecular diagnostic testing.
	26.05 Compare the advantages and disadvantages of molecular techniques over traditional diagnostic tests for infectious diseases.
	26.06 Identify the types of samples appropriate for molecular diagnostics.
	26.07 Discuss the ethical impact of genetic technologies.
	26.08 Outline requirements for reducing contamination in a molecular lab.
	26.09 Discuss nucleic acid probes and their role in clinical laboratory diagnostics.
Course Number: MLT0220 Occupational Completion Point: C Urinalysis and Body Fluids – 135 Hours	
27.0	Demonstrate knowledge of urinalysis and body fluids principles and procedures. The student will be able to:
	27.01 Identify the components of the urinary system and explain their functions.
	27.02 Discuss diseases affecting the urinary system.
	27.03 Describe collection, transport, and storage procedures for random and timed urine specimens.
	27.04 Discuss specific gravity techniques.
	27.05 Perform non-automated urinalysis techniques for chemical exam of the urine and interpret results.
	27.06 Demonstrate the proper use of automated urinalysis analyzers.

27.07	Describe renal function tests.
27.08	Describe principles of and perform routine physical and chemical analyses on urine.
27.09	Prepare urine sediments and perform identification and quantitation of microscopic formed elements.
27.10	Correlate abnormal physical, chemical, and microscopic urine results with associated pathological conditions.
27.11	Differentiate between transudates and exudates.
27.12	Perform physical, chemical, and microscopic evaluations of common body fluids.
Course Number: MLT0335: Occupational Completion Point: C Hematology and Hemostasis – 280 Hours	
28.0	Demonstrate knowledge of hematological principles and procedures. The student will be able to:
28.01	Discuss the organs, cells, and cellular interactions of the lymphoid, myeloid, and reticuloendothelial systems.
28.02	Demonstrate an understanding of basic concepts of hematopoiesis.
28.03	Identify the components of blood.
28.04	Discuss the function of formed elements of blood.
28.05	Demonstrate an understanding of the synthesis of normal and abnormal molecular structure of hemoglobin, common hemoglobinopathies, and associated tests.
28.06	Describe normal hemoglobin-oxygen function using the Oxygen Dissociation Curve (ODC).
28.07	Discuss assessment and impact of preanalytical, analytical, and post-analytical factors on hematology testing.
28.08	Calculate red blood cell indices.
28.09	Discuss selected cytochemical staining and flow cytometry procedures.
28.10	Evaluate red blood cell morphology.
28.11	State the review process of histogram/scatterplot/scattergram analysis.
28.12	Describe the categories used in a morphological classification of anemias.
28.13	Correlate complete blood cell results with a peripheral exam of blood smear.

	28.14 List the white blood cell maturation sequence and identify distinguishing morphology for the stages of developing white blood cells.
	28.15 Discuss normal and abnormal hematology findings, reference ranges, and associated diseases.
	28.16 Demonstrate an understanding of normal and abnormal white cell morphology, related disease states, and associated tests.
	28.17 Discuss the principles of and perform routine hematology procedures, applying quality control procedures as necessary.
	28.18 Perform commonly used methods to evaluate leukocytes, correlate, and verify automated cell counts with established criteria.
	28.19 Identify characteristic findings of nonmalignant leukocytic disorders (e.g., shift to the left, toxic granulation, Döhle bodies, etc.).
	28.20 Perform techniques of manual blood smear evaluation, including white blood cell differential, red cell, and platelet morphology.
	28.21 Correlate peripheral blood evaluation with automated cell analysis.
	28.22 Perform platelet and white blood cell counts on specimens using manual techniques, diluents, and correlate counts with peripheral smear.
29.0	Demonstrate knowledge of hemostasis and related diagnostic principles and procedures. The student will be able to:
	29.01 Discuss and define the mechanisms of hemostasis, including bleeding and clotting.
	29.02 Discuss common coagulopathies and associated treatments.
	29.03 Discuss assessment and impact of preanalytical factors on hemostasis testing.
	29.04 Describe the principles of and perform routine testing used in the evaluation of primary and secondary hemostasis.
	29.05 Demonstrate use of hemostasis laboratory equipment.
	29.06 Discuss additional hemostasis tests performed to differentiate the cause of abnormal routine tests.
Course Number: MLT0505 Occupational Completion Point: C Immunology – 60 Hours	
30.0	Demonstrate knowledge of immunology principles and procedures. The student will be able to:
	30.01 Discuss the functions of the cells of the immune system, cytokines, and regulatory molecules.
	30.02 Discuss physical and chemical properties of immunogens (antigens), immunoglobulins (antibodies), and complement.
	30.03 Compare and contrast the principles of basic agglutination, flocculation, and precipitation procedures in immunology/serology.

30.04	Perform basic procedures in immunology/serology.
30.05	Discuss principles of serum protein electrophoresis and immunofixation.
30.06	Discuss the clinical significance of the commonly performed immunological tests.
30.07	Discuss selected serological tests.
Course Number: MLT0640 Occupational Completion Point: C Clinical Chemistry – 255 Hours	
31.0	Demonstrate knowledge of clinical chemistry principles and procedures. The student will be able to:
31.01	Identify the chemistry analytes used to evaluate various organ functions.
31.02	Discuss principles of and perform common renal function tests.
31.03	Discuss carbohydrate, protein, and lipid metabolism.
31.04	Discuss principles of and perform commonly ordered tests related to carbohydrate, protein, and lipid metabolism.
31.05	Discuss the liver and its functions and related analytes.
31.06	Discuss principles of and perform commonly ordered liver function tests.
31.07	Discuss enzyme classification, origin, activity, and function.
31.08	Discuss principles of and perform commonly ordered enzyme procedures.
31.09	Discuss electrolyte balance as related to health and disease.
31.10	Discuss principles of and perform electrolyte analyses.
31.11	Discuss principles of and perform commonly ordered tests to evaluate cardiac function.
31.12	Discuss the physiology of the endocrine system and the principal tests used to evaluate endocrine function.
31.13	Discuss the role of the laboratory in therapeutic drug monitoring and toxicology.
31.14	Discuss and perform general electrophoresis techniques.
31.15	Discuss the clinical significance of commonly ordered clinical chemistry tests.

31.16	Demonstrate knowledge of principles of instrumentation as related to the clinical chemistry laboratory.
31.17	Discuss techniques of clinical chemistry related to the standardization of procedures and the use of standards and controls.
31.18	Discuss other techniques of clinical chemistry.
31.19	Discuss basic techniques of clinical chemistry related to normal and abnormal physiology.
Course Number: MLT0520 Occupational Completion Point: C Immunohematology – 255 Hours	
32.0	Demonstrate knowledge of immunohematology principles and procedures. The student will be able to:
32.01	Discuss donor interviews, criteria for selection, phlebotomy preparation, and donor blood processing.
32.02	Discuss blood component collection and, preparation, storage, and use.
32.03	Describe the roles of the Federal Drug Administration (FDA), American Association of Blood Banks (AABB), and state agencies, and how to contact each.
32.04	Compare the advantages and disadvantages of autologous versus homologous (allogenic) blood collection and transfusion.
32.05	Discuss basic genetics of the blood group antigens.
32.06	Discuss the ABO blood group systems testing procedures and recognize ABO discrepancies.
32.07	Describe required tests on recipient blood samples.
32.08	Discuss and differentiate other blood group systems such as Duffy, Kell, Kidd, S,s, Lu, and the common cold-reacting antibodies such as Le, P, I, M, and N.
32.09	Perform Rh testing to determine Rh phenotypes.
32.10	Perform and interpret antibody screening.
32.11	Perform antibody identification tests to detect clinically significant antibodies.
32.12	Discuss the safety and determine the compatibility of blood components for transfusion.
32.13	Discuss and perform routine compatibility testing, including the immediate spin crossmatch and the electronic crossmatch.
32.14	Discuss and perform phenotyping on recipient and donor specimens.
32.15	Identify symptoms of the suspected transfusion reaction and the required laboratory work-up.

32.16	Discuss immune hemolytic disorders and perform the direct antiglobulin test.
32.17	Discuss specialized techniques in immunohematology.
32.18	Perform quality control (QC) on reagents.
32.19	Describe the pathophysiology of hemolytic disease of the fetus and newborn.
Course Number: MLT0450 Occupational Completion Point: C Microbiology and Parasitology – 275 Hours	
33.0	Demonstrate knowledge of microbiological principles and procedures. The student will be able to:
33.01	Discuss microbial taxonomy and nomenclature.
33.02	Discuss bacterial metabolism, reproduction, cell structures, and their functions.
33.03	Discuss classification, composition, and preparation of culture media.
33.04	Discuss the human pathogenesis of bacteria.
33.05	Discuss and perform sterilization techniques.
33.06	Perform culturing techniques for urine, stool, wound, respiratory, body fluids, and blood specimens.
33.07	Perform techniques of microbiology related to inoculation and transfer of cultures.
33.08	Discuss the principles of Gram and Acid-Fast Bacilli (AFB) stains.
33.09	Accurately perform, read, and report Gram stains.
33.10	Perform techniques necessary for isolation and identification of aerobic, anaerobic, and facultative bacterial organisms.
33.11	Identify commonly encountered aerobic bacteria through morphological, physical, and biochemical properties.
33.12	Perform and interpret antimicrobial susceptibility tests.
33.13	Discuss the collection and handling of specimens for fungal, mycobacterial, and viral culture.
33.14	Prepare and examine specimens and identify ova and parasites when present.

Florida Department of Education
Student Performance Standards

Program Title: **Medical Clinical Laboratory Technician - ATD**
ATD CIP Number: **0351100401**

When this program is offered at the college level, the following standards and benchmarks apply:

Standards 1-11 are referred to as the **Health Science Core** and are required standards in this program. Secondary and Postsecondary students completing the health science core will not have to repeat the core in any other health science program in which it is a part. When the recommended sequence is followed, the structure allows students to complete at specified points for employment or remain for advanced training or cross-training.

To ensure consistency whenever these courses are offered, the health science core standards (1-11) and benchmarks have been placed in a separate document. To access this document, visit this link:
https://www.fldoe.org/core/fileparse.php/20062/urlt/health-sci-core-psav-cc-2223.rtf

Phlebotomy	
12.0	Demonstrate accepted professional, communication, and interpersonal skills. The student will be able to:
12.01	Demonstrate the appropriate professional behavior of a phlebotomist and describe the scope of practice (job skills and duties) for a phlebotomist.
12.02	Explain to the patient the procedure to be used in specimen collection.
12.03	Explain in detail the importance of identifying patients correctly when drawing blood.
12.04	Explain the importance of continuing education in relation to certification to maintain competency and skills.
13.0	Discuss phlebotomy in relation to the healthcare setting. The student will be able to:
13.01	List, classify, and discuss various departments and services within the health care setting in which the phlebotomist must interact with to obtain laboratory specimens from patients.
13.02	Identify the major departments/sections with the clinical laboratory, the major types of procedures run in each department/section, and their specimen requirements.
13.03	Describe roles of the major classifications of clinical laboratory personnel (i.e., pathologist, chief/administrative technologist, CLS, MLS, MLT, MT, phlebotomist, lab assistant, etc.).
14.0	Identify the anatomic structure and function of body systems in relation to services performed by the phlebotomist. The student will be able to:
14.01	Describe and define major body systems with emphasis on the circulatory system.

	14.02 List and describe the main superficial veins used in performing venipuncture.
	14.03 Locate the most appropriate sites(s) for capillary and venipuncture.
	14.04 Describe the function of the following blood components: erythrocytes, thrombocytes, leukocytes, and plasma.
	14.05 Compare and contrast serum and plasma as they relate to blood collection.
	14.06 Discuss hemostasis, hemolysis, and methods of prevention as they relate to blood collection.
15.0	Recognize and identify collection reagents supplies, equipment, and interfering chemical substances. The student will be able to:
	15.01 Identify and discuss proper use of appropriate types of equipment needed to collect various clinical laboratory blood specimens by venipuncture.
	15.02 Explain the special precautions and types of equipment needed to collect blood from the pediatric patient.
	15.03 Identify and discuss proper use of supplies used in collecting short-draw specimens or difficult draws.
	15.04 Identify and discuss the proper use of the various types of anticoagulants, preservatives, and gels used in blood collection, and the vacuum tube color-codes for these additives.
	15.05 Describe the types of specimens that are analyzed in the clinical laboratory and the phlebotomist's role in collecting and/or transporting these specimens to the laboratory.
	15.06 Describe substances potentially encountered during phlebotomy that can interfere in the analysis of blood constituents.
	15.07 Define and utilize correct medical terminology and metric measurement needed for specimen collection.
16.0	Demonstrate skills and knowledge necessary to perform phlebotomy. The student will be able to:
	16.01 Follow approved procedure for completing a laboratory requisition form and recognize a properly completed form.
	16.02 Demonstrate knowledge of established protocol for patient and specimen identification.
	16.03 Discuss appropriate methods for facilitating and preparing the patient for capillary and venipuncture collection.
	16.04 List appropriate antiseptic agents useful in preparing sites for capillary and venipuncture for adult and pediatric patients.
	16.05 Perform venipuncture by evacuated tube, butterfly, and syringe systems, demonstrating appropriate use of supplies, proper handling of equipment and specimens, and appropriate patient care.
	16.06 Describe the correct order of draw.
	16.07 Describe the use of barcoding systems used for positive patient identification and specimen identification.
	16.08 Convey an understanding of capillary puncture using appropriate supplies and techniques for adult and pediatric patients.

	16.09	Describe the most common complications associated with capillary and venipuncture, their causes, prevention, and treatment.
	16.10	Recognize and respond to possible adverse patient reactions such as allergies, convulsions, syncope, lightheadedness, vomiting, and nerve involvement.
	16.11	Perform appropriate procedures for disposing of used or contaminated capillary and venipuncture supplies.
	16.12	Demonstrate the proper procedure for collecting blood cultures.
	16.13	Demonstrate a working understanding of how the age and weight of patients impact the maximum amount of blood that can be safely drawn.
17.0	Practice infection control following standard precautions. The student will be able to:	
	17.01	Define the term “hospital-acquired infection.”
	17.02	Demonstrate and practice procedures for infection prevention, including hand washing skills.
	17.03	Discuss transmission-based precautions.
	17.04	Identify potential routes of infection and their complications.
18.0	Practice accepted procedures of transporting, accessioning, and processing specimens. The student will be able to:	
	18.01	Instruct patients in the proper collection of urine (clean catch, mid-stream), sputum, and stool samples.
	18.02	Follow the approved procedure for preparation and processing (e.g., centrifugation, separation, aliquoting, labeling, and storage) of serum, plasma, urine, sputum, stool, and wound culture specimens.
	18.03	Describe the significance of time constraints for specimen collection, transporting, and delivery.
	18.04	Describe routine procedures for transporting and processing specimens, including DOT packaging requirements.
19.0	Practice laboratory and patient safety procedures. The student will be able to:	
	19.01	Distinguish and perform procedures that ensure the reliability of test results when collecting laboratory specimens.
	19.02	Practice appropriate patient safety.
	19.03	Practice safety in accordance with OSHA (State & Federal guidelines) for chemical, biological, and PPE established procedures, including proper disposal of sharps and biohazardous materials.
	19.04	Follow documentation procedures for work-related accidents.
	19.05	Implement appropriate Joint Commission patient safety goals and other accrediting/regulatory agency guidelines.

Medical Laboratory Technician	
20.0	Demonstrate knowledge and use of basic laboratory equipment and techniques. The student will be able to:
20.01	Identify the parts of the microscope and explain the function of each.
20.02	Demonstrate the proper technique for use of the microscope.
20.03	Demonstrate use of standard laboratory equipment, including pipetting skills and preventative maintenance.
20.04	Perform basic laboratory math calculations, including serial dilutions and making solutions.
20.05	Understand the principles of quality assurance to correct problems encountered in monitoring daily quality control.
20.06	Evaluate laboratory findings to confirm results according to standard operating procedure and best laboratory practices.
20.07	Demonstrate knowledge of principles and operation of basic laboratory instruments.
21.0	Demonstrate basic knowledge of and perform clinical laboratory Point of Care (POC) testing (Waived). The student will be able to
21.01	Demonstrate the ability to interpret instructions of point of care testing, including, but not limited to the following:
	• Test principle
	• Storage and Stability
	• Internal vs. External Quality Control
	• Specimen collection and preparation
	• Directions for use
	• Interpretation of results
	• Interfering substances
21.02	Demonstrate and discuss knowledge of lot numbers and their importance in regard to both kits and reagents.
21.03	Demonstrate knowledge of the frequency in performing quality control procedures.
21.04	Understand the Clinical Laboratory Improvement Amendments (CLIA) 88 classification of laboratory testing into waived, moderate, and highly complex, including the personnel qualified to perform each.
22.0	Demonstrate basic knowledge of and perform Point of Care (POC) Testing using CLIA approved waived instrumentation. The student will be able to:

	22.01 Demonstrate and perform POC testing specific to microbiology, hematology, urinalysis, and clinical chemistry.
	22.02 Perform instrument maintenance.
	22.03 Demonstrate knowledge of quality control and calibrations involved with the POC instruments.
	22.04 Identify normal limits and associate abnormal results with disease or disorders.
	22.05 Discuss the significance of reporting critical values as it applies to POC testing as soon as possible.
23.0	Discuss the general responsibilities and functions encountered by a medical laboratory technician. The students will be able to:
	23.01 Ask appropriate scientific questions and recognize what is involved in experimental approaches to the solutions of such questions.
	23.02 Communicate laboratory results to healthcare professionals.
	23.03 Demonstrate ability to evaluate laboratory results under the supervision of a medical laboratory scientist.
	23.04 Demonstrate ability to report laboratory results in written or oral form under the supervision of a medical laboratory scientist.
	23.05 List licensure and certification requirements of the major classifications of clinical laboratory personnel.
24.0	Apply quality assurance principles and protocols for laboratory equipment. The student will be able to:
	24.01 Assess specimen acceptability using standard operating procedure, including rejection/recollection criteria.
	24.02 Describe procedures for transporting and processing specimens.
	24.03 Describe the clinical laboratory role in providing quality assurance in laboratory testing, reporting, and the use and maintenance of equipment.
	24.04 Understand the need for calibration of laboratory equipment.
	24.05 Demonstrate and record quality control procedures required for the tests performed and recognize unacceptable results.
	24.06 Report identified problems encountered in daily quality control according to standard operating procedures.
	24.07 Comply with current Occupational Safety and Health Administration (OSHA) regulations regarding laboratory hazards.
25.0	Demonstrate knowledge of the operation of computer systems. The student will be able to:
	25.01 Discuss the role of computer systems in laboratory data management.
	25.02 Demonstrate knowledge of common computer terminology.
	25.03 Demonstrate entry-level computer operations for specimen accessioning, data reporting, and quality control recording.

	25.04 Demonstrate entry-level operational skills in the use of computer-interfaced analytical instrumentation.
26.0	Demonstrate an understanding of the basic principles of molecular diagnostics. The student will be able to:
	26.01 Discuss the principles and major steps of the polymerase chain reaction (PCR).
	26.02 Discuss the structure, function, and components of DNA and RNA.
	26.03 Define the key terms of molecular diagnostics.
	26.04 List and describe the principles of DNA, RNA, and molecular diagnostic testing.
	26.05 Compare the advantages and disadvantages of molecular techniques over traditional diagnostic tests for infectious diseases.
	26.06 Identify the types of samples appropriate for molecular diagnostics.
	26.07 Discuss the ethical impact of genetic technologies.
	26.08 Outline requirements for reducing contamination in a molecular lab.
	26.09 Discuss nucleic acid probes and their role in clinical laboratory diagnostics.
27.0	Demonstrate knowledge of urinalysis and body fluids principles and procedures. The student will be able to:
	27.01 Identify the components of the urinary system and explain their functions.
	27.02 Discuss diseases affecting the urinary system.
	27.03 Describe collection, transport, and storage procedures for random and timed urine specimens.
	27.04 Discuss specific gravity techniques.
	27.05 Perform non-automated urinalysis techniques for chemical exam of the urine and interpret results.
	27.06 Demonstrate the proper use of automated urinalysis analyzers.
	27.07 Describe renal function tests.
	27.08 Describe principles of and perform routine physical and chemical analyses on urine.
	27.09 Prepare urine sediments and perform identification and quantitation of microscopic formed elements.
	27.10 Correlate abnormal physical, chemical, and microscopic urine results with associated pathological conditions.
	27.11 Differentiate between transudates and exudates.

	27.12 Perform physical, chemical, and microscopic evaluations of common body fluids.
28.0	Demonstrate knowledge of hematological principles and procedures. The student will be able to:
	28.01 Discuss the organs, cells, and cellular interactions of the lymphoid, myeloid, and reticuloendothelial systems.
	28.02 Demonstrate an understanding of basic concepts of hematopoiesis.
	28.03 Identify the components of blood.
	28.04 Discuss the function of formed elements of blood.
	28.05 Demonstrate an understanding of the synthesis of normal and abnormal molecular structure of hemoglobin, common hemoglobinopathies, and associated tests.
	28.06 Describe normal hemoglobin-oxygen function using the Oxygen Dissociation Curve (ODC).
	28.07 Discuss assessment and impact of preanalytical, analytical, and post-analytical factors on hematology testing.
	28.08 Calculate red blood cell indices.
	28.09 Discuss selected cytochemical staining and flow cytometry procedures.
	28.10 Evaluate red blood cell morphology.
	28.11 State the review process of histogram/scatterplot/scattergram analysis.
	28.12 Describe the categories used in a morphological classification of anemias.
	28.13 Correlate complete blood cell results with a peripheral exam of blood smear.
	28.14 List the white blood cell maturation sequence and identify distinguishing morphology for the stages of developing white blood cells.
	28.15 Discuss normal and abnormal hematology findings, reference ranges, and associated diseases.
	28.16 Demonstrate an understanding of normal and abnormal white cell morphology, related disease states, and associated tests.
	28.17 Discuss the principles of and perform routine hematology procedures, applying quality control procedures as necessary.
	28.18 Perform commonly used methods to evaluate leukocytes, correlate and verify automated cell counts with established criteria.
	28.19 Identify characteristic findings of nonmalignant leukocytic disorders (e.g., shift to the left, toxic granulation, Döhle bodies, etc.).
	28.20 Perform techniques of manual blood smear evaluation, including white blood cell differential, red cell, and platelet morphology.
	28.21 Correlate peripheral blood evaluation with automated cell analysis.

	28.22 Perform platelet and white blood cell counts on specimens using manual techniques, diluents, and correlate counts with peripheral smear.
29.0	Demonstrate knowledge of hemostasis and related diagnostic principles and procedures. The student will be able to:
	29.01 Discuss and define the mechanisms of hemostasis, including bleeding and clotting.
	29.02 Discuss common coagulopathies and associated treatments.
	29.03 Discuss assessment and impact of preanalytical factors on hemostasis testing.
	29.04 Describe the principles of and perform routine testing used in the evaluation of primary and secondary hemostasis.
	29.05 Demonstrate use of hemostasis laboratory equipment.
	29.06 Discuss additional hemostasis tests performed to differentiate the cause of abnormal routine tests.
30.0	Demonstrate knowledge of immunology principles and procedures. The student will be able to:
	30.01 Discuss the functions of the cells of the immune system, cytokines, and regulatory molecules.
	30.02 Discuss physical and chemical properties of immunogens (antigens), immunoglobulins (antibodies), and complement.
	30.03 Compare and contrast the principles of basic agglutination, flocculation, and precipitation procedures in immunology/serology.
	30.04 Perform basic procedures in immunology/serology.
	30.05 Discuss principles of serum protein electrophoresis and immunofixation.
	30.06 Discuss the clinical significance of the commonly performed immunological tests.
	30.07 Discuss selected serological tests.
31.0	Demonstrate knowledge of clinical chemistry principles and procedures. The student will be able to:
	31.01 Identify the chemistry analytes used to evaluate various organ functions.
	31.02 Discuss principles of and perform common renal function tests.
	31.03 Discuss carbohydrate, protein, and lipid metabolism.
	31.04 Discuss principles of and perform commonly ordered tests related to carbohydrate, protein, and lipid metabolism.
	31.05 Discuss the liver and its functions and related analytes.
	31.06 Discuss principles of and perform commonly ordered liver function tests.

31.07	Discuss enzyme classification, origin, activity, and function.
31.08	Discuss principles of and perform commonly ordered enzyme procedures.
31.09	Discuss electrolyte balance as related to health and disease.
31.10	Discuss principles of and perform electrolyte analyses.
31.11	Discuss principles of and perform commonly ordered tests to evaluate cardiac function.
31.12	Discuss the physiology of the endocrine system and the principal tests used to evaluate endocrine function.
31.13	Discuss the role of the laboratory in therapeutic drug monitoring and toxicology.
31.14	Discuss and perform general electrophoresis techniques.
31.15	Discuss the clinical significance of commonly ordered clinical chemistry tests.
31.16	Demonstrate knowledge of principles of instrumentation as related to the clinical chemistry laboratory.
31.17	Discuss techniques of clinical chemistry related to the standardization of procedures and the use of standards, blanks, and controls.
31.18	Discuss other techniques of clinical chemistry related to visual colorimetry, calibration, and use of the spectrophotometer.
31.19	Discuss basic techniques of clinical chemistry related to normal and abnormal physiology.
32.0	Demonstrate knowledge of immunohematology principles and procedures. The student will be able to:
32.01	Discuss donor interviews, criteria for selection, phlebotomy preparation, and donor blood processing.
32.02	Discuss blood component collection and, preparation, storage, and use.
32.03	Describe the roles of the Federal Drug Administration (FDA), the American Association of Blood Banks (AABB), and state agencies, and how to contact each.
32.04	Compare the advantages and disadvantages of autologous versus homologous (allogenic) blood collection and transfusion.
32.05	Discuss basic genetics of the blood group antigens.
32.06	Discuss the ABO blood group system testing procedures and recognize ABO discrepancies.
32.07	Describe required tests on recipient blood samples.
32.08	Discuss and differentiate other blood group systems such as Duffy, Kell, Kidd, S,s, Lu, and the common cold-reacting antibodies such as Le, P, I, M, and N.

	32.09 Perform Rh testing to determine Rh phenotypes.
	32.10 Perform and interpret antibody screening.
	32.11 Perform antibody identification tests to detect clinically significant antibodies.
	32.12 Discuss the safety and determine the compatibility of blood components for transfusion.
	32.13 Discuss and perform routine compatibility testing, including the immediate spin crossmatch and the electronic crossmatch.
	32.14 Discuss and perform phenotyping on recipient and donor specimens.
	32.15 Identify symptoms of the suspected transfusion reaction and the required laboratory work-up.
	32.16 Discuss immune hemolytic disorders and perform the direct antiglobulin test.
	32.17 Discuss specialized techniques in immunohematology.
	32.18 Perform quality control (QC) on reagents.
	32.19 Describe the pathophysiology of hemolytic disease of the fetus and newborn.
33.0	Demonstrate knowledge of microbiological principles and procedures. The student will be able to:
	33.01 Discuss microbial taxonomy and nomenclature.
	33.02 Discuss bacterial metabolism, reproduction, cell structures, and their functions.
	33.03 Discuss classification, composition, and preparation of culture media.
	33.04 Discuss the human pathogenesis of bacteria.
	33.05 Discuss and perform sterilization techniques.
	33.06 Perform culturing techniques for urine, stool, wound, respiratory, body fluids, and blood specimens.
	33.07 Perform techniques of microbiology related to inoculation and transfer of cultures.
	33.08 Discuss the principles of Gram and Acid-Fast Bacilli (AFB) stains.
	33.09 Accurately perform, read and report Gram stains.
	33.10 Perform techniques necessary for isolation and identification of aerobic, anaerobic, and facultative bacterial organisms.
	33.11 Identify commonly encountered aerobic bacteria through morphological, physical, and biochemical properties.

33.12 Perform and interpret antimicrobial susceptibility tests.
33.13 Discuss the collection and handling of specimens for fungal, mycobacterial, and viral culture.
33.14 Prepare and examine specimens and identify ova and parasites when present.

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools, and equipment, as well as experimental, quality, and safety procedures, are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate, and troubleshoot equipment/tools used to make observations. Students understand measurement error and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

Clinical learning experiences in a clinical laboratory and related areas are an integral part of this program. Clinical learning experiences should reflect the full breadth of responsibilities expected of a Medical Laboratory Technician and should include appropriate experience in each of the areas of the laboratory described herein. The specified length for each of the courses listed is inclusive of clinical experience for each of the respective laboratory sections.

Special Notes

This program meets the Department of Health HIV/AIDS Domestic Violence, and Prevention of Medical Errors education requirements. Upon completion of this program, the instructor will provide a certificate to the student verifying that these requirements have been met.

If students in this program are seeking a licensure, certificate, or registration through the Department of Health, please refer to 456.0635, F.S. for more information on disqualification for a license, certificate, or registration through the Department of Health.

Either a community college or school district may offer the ATD program. When offered at the community college, college credit shall be awarded for completion of this program. When offered at the school district, vocational credit will be awarded. Vocational credit will be converted to college credit upon transfer to the AS degree at the community college.

In accordance with Rule 6A-10.024, F.A.C. all faculty providing instruction must have at least a baccalaureate degree or an associate degree with demonstrated competencies in the specific instructional program as defined by the Southern Association of Colleges and Schools.
The programs should be accredited by:

The Accrediting Bureau of Health Education Schools (ABHES)
7777 Leesburg Pike, Suite 314, North Falls Church, VA 22403
(703) 917-9503 /Fax (703) 917-4109 info@abhes.org

Or any other agency as specified by the Division of Medical Quality Administration, Board of Clinical Laboratory Personnel Chapter 483, F.S., Rule 590. F.A.C., "Florida Clinical Laboratory Personnel Law". The graduate of a board-approved program should be prepared to take the appropriate licensing examination to practice in Florida and an appropriate national certifying examination.

For further information contact:

Board of Clinical Laboratory Personnel
4052 Bald Cypress Way, Bin CO7, Tallahassee, FL 32399-3257
(850) 245-4444 x3625

National Certification is voluntary and may be obtained from the:

American Medical Technologists
710 Higgins Rd, Park Ridge, IL. 60068
(847) 823-5169 or 800-275-1268

Or

National Healthcareer Association
7500 West 160th Street, Stilwell, Kansas 66085
800-499-9092 or (973) 644-4797 www.nhanow.com

The Core should be taken first in the program. Following the successful completion of the core, the student is eligible to take the National Health Care Foundation Skill Standards Assessment with instructor approval and the completion of a portfolio.

Career and Technical Student Organization (CTSO)

CTSOs are co-curricular career and technical student organizations providing leadership training and reinforcing specific career and technical skills. Career and Technical Student Organizations provide activities for students as an integral part of the instruction offered. Other CTSOs not listed in this curriculum framework or recognized by the Florida Department of Education are permissible provided they support student mastery over the standards and benchmarks of this curriculum framework.

Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology, and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

Note: postsecondary curriculum and regulated secondary programs cannot be modified.

Program Length

In accordance with Rule 6A-10.024, F.A.C. an ATD program consists of a course of study that is part of an AS or AAS degree program, is less than 60 credit hours, is approximately 50% of the technical component (non-general education), and leads to employment in a specific occupation. An ATD program may consist of either technical credit or college credit.

Students must have a high school diploma, a GED, or a certificate of completion to be admitted to an ATD program. Within six weeks of entry, students in ATD programs of 450 or more hours must be tested pursuant to Rule 6A-10.040, F.A.C. and if below minimum standards for completion from the program, must receive remedial instruction. The minimum standards must be at least the equivalent of a score of ten (10) on all sections of basic skills test approved in Rule 6A-10.040, F.A.C. Students must successfully complete all remedial instruction before completing the ATD.

Community Colleges may offer either college or career credit toward the ATD. A Career Center in a public school district may offer an ATD program only as technical credit, with college credit awarded to a student upon articulation to a community college (Section 1004.02, F.S.)

When offered at a community college the standard length of this program is 40 credits. When offered at a technical center the standard length of this program is 1515 clock hours.

In accordance with Rule 6A-10.024, F.A.C. all faculty providing instruction must have at least a baccalaureate degree or an associate degree with demonstrated competencies in the specific instructional program as defined by the Southern Association of Colleges and Schools.

Florida Department of Education
Curriculum Framework

The standards and benchmarks for this program were updated for the 2026-27 academic year.

Program Title: **Ophthalmic Laboratory Technician**
Career Cluster: **Health Science**

College Credit Certificate	
CIP Number	0351100600
Program Type	College Credit Certificate (CCC)
Program Length	24 credit hours
CTSO	HOSA
SOC Codes (all applicable)	For program SOC codes, please see the Program and Course Tables section of the CTE Program Resources page linked below.
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml

Purpose

This certificate program is part of the Opticianry AS degree program (1351180100).

A College Credit Certificate consists of a program of instruction of less than sixty (60) credits of college-level courses, which is part of an AS or AAS degree program and prepares students for entry into employment (Rule 6A-14.030, F.A.C.).

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Health Science career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of Health Science career cluster.

The purpose of this program is to prepare students for employment as Ophthalmic Laboratory Technicians (Ophthalmic Laboratory Technicians).

The content includes but is not limited to basic instruction in anatomy and physiology, CPR, Heartsaver, office practices and dispensing of visual devices. Because optometrists now deal with certain drugs, students need knowledge of diagnostic and therapeutic drugs under supervision.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Program Structure **only if applicable**

This program is a planned sequence of instruction consisting ---------- credit hours.

When developing the course sequence for the local implementation of this program, select courses that:

- Meet the skill development requirements of the standards and benchmarks of this program.
- Where reasonable and practicable, align with programs offered by your institution or other postsecondary institutions in Florida, including:
  - Related AS and AAS degrees.
  - Baccalaureate degrees within the same career pathway and/or Federal CIP code.

Visit FloridaShines' Discover Programs website to identify other institutions that offer similar programs to review their course sequencing. Where appropriate, course alignment between institutions offering related programs can facilitate interagency student articulation.

Visit FloridaShines' Common Prerequisites Manual to identify courses that are prerequisites for admission into an upper division program. When sub-baccalaureate courses are aligned to the course admissions requirements of baccalaureate programs with the same career pathway, students can enter upper division coursework seamlessly.

Florida's Career Readiness Skills for CTE Programs

Employability Skills	
01.0	Apply academic skills to workplace scenarios.
01.01	Use reading skills.
01.02	Use writing skills.
01.03	Use mathematical strategies and procedures.
01.04	Use scientific principles and procedures.
02.0	Design a solution to an industry problem.
02.01	Use critical thinking.
02.02	Use creativity.
02.03	Make sound decisions.
02.04	Solve problems.
02.05	Reason.
02.06	Plan and organize.
03.0	Manage resources within an industry project
03.01	Manage time.
03.02	Manage money or resources.
03.03	Manage materials.
03.04	Manage personnel.
04.0	Oversee the subcomponents, operations and output of a technical or organizational system.
04.01	Manage systems.
04.02	Monitor systems.
04.03	Improve systems.
05.0	Use information for decision making.
05.01	Locate information.
05.02	Organize information.
05.03	Use information.

	05.04 Analyze information.
	05.05 Communicate information.
06.0	Apply relevant technology to workplace scenarios to aid productivity.
	06.01 Use technology.
07.0	Interpret and express interpersonal communication.
	07.01 Communicate verbally.
	07.02 Listen actively.
	07.03 Comprehend written material.
	07.04 Convey information in writing.
	07.05 Communicate nonverbally.
	07.06 Interpret nonverbal communication.
08.0	Interact with others to accomplish workplace goals.
	08.01 Collaborate with others in a team.
	08.02 Respond to customer needs.
	08.03 Exercise leadership.
	08.04 Negotiate to resolve conflict.
	08.05 Respect others.
09.0	Manage personal behavior to maximize productivity and professional growth.
	09.01 Demonstrate responsibility and self-discipline.
	09.02 Adapt and show flexibility.
	09.03 Work independently.
	09.04 Demonstrate a willingness to learn.
	09.05 Demonstrate integrity.
	09.06 Demonstrate professionalism.
	09.07 Take initiative.
	09.08 Display positive attitude.
	09.09 Take responsibility for professional growth.

Job Attainment	
10.0	Find, assess and apply to job opportunities.
10.01	Identify online job posts relevant to his or her career aspirations.
10.02	Compare and contrast the job posts' required qualifications, job duties, compensation, benefits and employers.
10.03	Define what information, documentation and writing prompts are required for the positions.
11.0	Communicate personal competence, character and fit for a job opportunity.
11.01	Develop a resume.
11.02	Write a cover letter.
11.03	Curate a professional portfolio that includes work products.
11.04	Prepare for and experience a mock job interview.
12.0	Cultivate and leverage relationships to professionally advance.
12.01	Request a signed reference letter, letter of recommendation and/or an online skill/professionalism endorsement.
12.02	Develop a plan to cultivate a professional digital footprint.
12.03	Develop a networking plan for a specific industry of interest.

Standards

After successfully completing this program, the student will be able to perform the following:

01.0 Demonstrate knowledge of the health care delivery system and health occupations.
02.0 Demonstrate the ability to communicate and use interpersonal skills effectively.
03.0 Demonstrate legal and ethical responsibilities.
04.0 Demonstrate an understanding of and apply wellness and disease concepts.
05.0 Recognize and practice safety and security procedures.
06.0 Recognize and respond to emergency situations.
07.0 Recognize and practice infection control procedures.
08.0 Demonstrate an understanding of information technology applications in healthcare.
09.0 Demonstrate employability skills.
10.0 Demonstrate knowledge of blood borne diseases, including HIV/AIDS.
11.0 Apply basic math and science skills.
12.0 Surface ophthalmic lenses.
13.0 Edge and finish lenses.
14.0 Insert and mount lenses.
15.0 Select and order frames and lenses.
16.0 Fit and dispense prescriptions.
17.0 Fit contact lenses.
18.0 Repair frames.

Florida Department of Education
Student Performance Standards

Program Title: **Ophthalmic Laboratory Technician**
CIP Number: **0351100600**
Program Length: **24 credit hours**

Standards 1-11 are referred to as the **Health Science Core** and are required standards in this program. Secondary and Postsecondary students completing the health science core will not have to repeat the core in any other health science program in which it is a part. When the recommended sequence is followed, the structure allows students to complete at specified points for employment or remain for advanced training or cross-training.

To ensure consistency whenever these courses are offered, the health science core standards (1-11) and benchmarks have been placed in a separate document. To access this document, visit this link:
https://www.fldoe.org/core/fileparse.php/20569/urlt/health-sci-core-psav-cc-2324.rtf

This certificate program is part of the Opticianry AS degree program (1351180100). At the completion of this program, the student will be able to:	
12.0	Surface ophthalmic lenses. The student will be able to:
	12.01 Demonstrate knowledge of layout single vision and multi-focal lenses.
	12.02 Demonstrate knowledge of fabrication of single vision lenses and/or multi-focal lenses.
	12.03 Demonstrate knowledge of selecting ophthalmic lenses and supplies.
	12.04 Perform lens verification and inspection.
13.0	Edge and finish lenses. The student will be able to:
	13.01 Layout and block lenses.
	13.02 Machine and hand edge lenses.
	13.03 Perform lens verification and inspection.
	13.04 Select appropriate lenses.
14.0	Insert and mount lenses. The student will be able to:
	14.01 Insert lenses into plastic frames.

	14.02 Insert lenses into metal frames.
	14.03 Mount lenses into rimless and semi-rimless mountings or other appropriate designs.
	14.04 Perform final inspection of eye glasses.
	14.05 Demonstrate knowledge of lens enhancements/treatments.
15.0	Select and order frames and lenses. The student will be able to:
	15.01 Analyze written prescriptions.
	15.02 Duplicate prescriptions from existing lenses.
	15.03 Evaluate patient's life-style needs.
	15.04 Use selected instruments to assist in the calculation of fitting measurements, including position of wear (POW).
	15.05 Discuss charges with patients.
	15.06 Order lenses and frames, including enhancements/treatments.
16.0	Fit and dispense prescriptions. The students will be able to:
	16.01 Verify finished prescriptions to specifications.
	16.02 Align frames.
	16.03 Adjust and fit optical devices to patients.
17.0	Fit contact lenses. The student will be able to:
	17.01 Analyze prescriptions.
	17.02 Evaluate patient suitability.
	17.03 Use selected instruments to conduct and assess fittings.
	17.04 Identify types of contact lenses.
	17.05 Perform patient training.
18.0	Repair frames. The student will be able to:
	18.01 Replace/repair nose pieces on plastic or metal frames.

18.02 Replace/repair frame-front, temples, monofilament, and rimless.

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as, experimental, quality, and safety procedures are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate and troubleshoot equipment/tools used to make observations. Students understand measurement error; and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

Special Notes

This program meets the Department of Health's education requirements for HIV/AIDS, Domestic Violence and Prevention of Medical Errors. Although not a requirement for initial licensure, it is a requirement for renewal, therefore the instructor **may** provide a certificate for renewal purposes to the student verifying these requirements have been met.

If students in this program are seeking a licensure, certificate or registration through the Department of Health, please refer to 456.0635, F.S. for more information on disqualification for a license, certificate, or registration through the Department of Health.

Students are prepared to assist in performing tests to determine defects in vision, preparing and fitting eyeglasses and contact lenses, and administering corrective eye exercises and other treatments under the supervision of a person licensed under 458, 459, 463 or 484, F.S.

This program focuses on broad, transferable skills and stresses understanding and demonstration of the following elements of the health care industry; planning, management, finance, technical and production skills, underlying principles of technology, labor issues, community issues and health, safety, and environmental issues.

Students should be strongly encouraged to take the Certification examination offered by the Paraoptometric Section of the American Optometric Association.

Cooperative training - OJT is appropriate for this program. Whenever cooperative training - OJT is offered, the following are required for each student: a training plan, signed by the student, teacher, and employer, which includes instructional objectives and a list of on-the-job and in-school learning experiences; a workstation that reflects equipment, skills and tasks that are relevant to the occupation which the student has chosen as a career goal. The student must receive compensation for work performed.

The CORE should be taken first in the program. Following the successful completion of the core, the student is eligible to take the National Health Care Foundation Skill Standards Assessment with instructor approval and the completion of a portfolio.

Career and Technical Student Organization (CTSO)

CTSOs are co-curricular career and technical student organizations providing leadership training and reinforcing specific career and technical skills. Career and Technical Student Organizations provide activities for students as an integral part of the instruction offered. Other CTSOs not listed in this curriculum framework or recognized by the Florida Department of Education are permissible provided they support student mastery over the standards and benchmarks of this curriculum framework.

Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

Florida Department of Education
Curriculum Framework

The standards and benchmarks for this program were updated for the 2026-27 academic year. This program title has changed, formerly Central Sterile Processing Technologist.

Program Title: **Sterile Processing Technician**
Career Cluster: **Health Science**

College Credit Certificate	
CIP Number	0351101202
Program Type	College Credit Certificate (CCC)
Program Length	30 credit hours
CTSO	HOSA
SOC Codes (all applicable)	For program SOC codes, please see the Program and Course Tables section of the CTE Program Resources page linked below.
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml

Purpose

This certificate program is part of the Surgical Services AS degree program (1351090901).

A College Credit Certificate consists of a program of instruction of less than sixty (60) credits of college-level courses, which is part of an AS or AAS degree program and prepares students for entry into employment (Rule 6A-14.030, F.A.C.).

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Health Science career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of Health Science career cluster.

This program is designed to prepare students for employment as sterile processing technicians (Medical Equipment Preparers), central service technicians.

The content includes but is not limited to central services departmental organization and function; basic anatomy, physiology, microbiology and chemistry related to central service activities; quality assurance; infection control and isolation techniques, principles of safety; principles, methods

and controls of sterilization processes; cleaning, processing, packaging, distributing, storing, and inventory control of sterile goods, instruments, trays, and equipment; medical terminology; surgical instrumentation; basic computer skills, interpersonal and job seeking skills, fundamentals of communication, case cart management, laparoscopic specialty, orthopedic specialty, flexible scope processing, shift supervisory skills and procurement of supplies and equipment.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Florida's Career Readiness Skills for CTE Programs

Employability Skills	
01.0	Apply academic skills to workplace scenarios.
01.01	Use reading skills.
01.02	Use writing skills.
01.03	Use mathematical strategies and procedures.
01.04	Use scientific principles and procedures.
02.0	Design a solution to an industry problem.
02.01	Use critical thinking.
02.02	Use creativity.
02.03	Make sound decisions.
02.04	Solve problems.
02.05	Reason.
02.06	Plan and organize.
03.0	Manage resources within an industry project
03.01	Manage time.
03.02	Manage money or resources.
03.03	Manage materials.
03.04	Manage personnel.
04.0	Oversee the subcomponents, operations and output of a technical or organizational system.
04.01	Manage systems.
04.02	Monitor systems.
04.03	Improve systems.
05.0	Use information for decision making.
05.01	Locate information.
05.02	Organize information.
05.03	Use information.

	05.04 Analyze information.
	05.05 Communicate information.
06.0	Apply relevant technology to workplace scenarios to aid productivity.
	06.01 Use technology.
07.0	Interpret and express interpersonal communication.
	07.01 Communicate verbally.
	07.02 Listen actively.
	07.03 Comprehend written material.
	07.04 Convey information in writing.
	07.05 Communicate nonverbally.
	07.06 Interpret nonverbal communication.
08.0	Interact with others to accomplish workplace goals.
	08.01 Collaborate with others in a team.
	08.02 Respond to customer needs.
	08.03 Exercise leadership.
	08.04 Negotiate to resolve conflict.
	08.05 Respect others.
09.0	Manage personal behavior to maximize productivity and professional growth.
	09.01 Demonstrate responsibility and self-discipline.
	09.02 Adapt and show flexibility.
	09.03 Work independently.
	09.04 Demonstrate a willingness to learn.
	09.05 Demonstrate integrity.
	09.06 Demonstrate professionalism.
	09.07 Take initiative.
	09.08 Display positive attitude.
	09.09 Take responsibility for professional growth.

Job Attainment	
10.0	Find, assess and apply to job opportunities.
10.01	Identify online job posts relevant to his or her career aspirations.
10.02	Compare and contrast the job posts' required qualifications, job duties, compensation, benefits and employers.
10.03	Define what information, documentation and writing prompts are required for the positions.
11.0	Communicate personal competence, character and fit for a job opportunity.
11.01	Develop a resume.
11.02	Write a cover letter.
11.03	Curate a professional portfolio that includes work products.
11.04	Prepare for and experience a mock job interview.
12.0	Cultivate and leverage relationships to professionally advance.
12.01	Request a signed reference letter, letter of recommendation and/or an online skill/professionalism endorsement.
12.02	Develop a plan to cultivate a professional digital footprint.
12.03	Develop a networking plan for a specific industry of interest.

Standards

After successfully completing this program, the student will be able to perform the following:

01.0 Demonstrate knowledge of the healthcare delivery system and health occupations.
02.0 Demonstrate the ability to communicate and use interpersonal skills effectively.
03.0 Demonstrate legal and ethical responsibilities.
04.0 Demonstrate an understanding of and apply wellness and disease concepts.
05.0 Recognize and practice safety and security procedures.
06.0 Recognize and respond to emergency situations.
07.0 Recognize and practice infection control procedures.
08.0 Demonstrate an understanding of information technology applications in healthcare.
09.0 Demonstrate employability skills.
10.0 Demonstrate knowledge of blood borne diseases, including HIV/AIDS.
11.0 Apply basic math and science skills.
12.0 Demonstrate language arts knowledge and skills.
13.0 Solve problems using critical thinking skills, creativity, and innovation.
14.0 Describe the roles within teams, work units, departments, organizations, inter-organizational systems, and the larger environment.
15.0 Demonstrate leadership and teamwork skills needed to accomplish team goals and objectives.
16.0 Demonstrate the ability to recall, dispose of, or reprocess sterile supplies/instruments.
17.0 Identify fundamentals of the supply chain.
18.0 Demonstrate the roles and responsibilities of the sterile processing technician.
19.0 Recognize basic principles of microbiology.
20.0 Interpret and apply medical terminology and anatomical terms as they relate to equipment and supplies issued by the sterile processing department.
21.0 Describe how sterile processing is involved in controlling infections in healthcare facilities.
22.0 Explain the purpose of the Occupational Safety and Health Act (OSHA).
23.0 Receive, decontaminate, clean, prepare, disinfect, and sterilize reusable items.
24.0 Demonstrate the use of sterilization process monitors, including proper utilization of appropriate chemical indicators and bacterial spore tests for all sterilizers.
25.0 Demonstrate the ability to identify and select appropriate instrumentation or equipment that meets the needs of the surgical specialty.

Florida Department of Education
Student Performance Standards

Program Title: **Sterile Processing Technician**
CIP Number: **0351101202**
Program Length: **30 credit hours**

Standards 1-11 are referred to as the **Health Science Core** and are required standards in this program. Secondary and Postsecondary students completing the health science core will not have to repeat the core in any other health science program in which it is a part. When the recommended sequence is followed, the structure allows students to complete at specified points for employment or remain for advanced training or cross-training.

To ensure consistency whenever these courses are offered, the health science core standards (1-11) and benchmarks have been placed in a separate document. To access this document, visit this link:
https://www.fldoe.org/core/fileparse.php/20569/urlt/health-sci-core-psav-cc-2324.rtf

This certificate program is part of the Surgical Services AS degree program (1351090901). At the completion of this program, the student will be able to:	
Students completing intended outcomes (12-25), in addition to the Health Science Core, will meet the requirements of the Sterile Processing Technician CCC.	
12.0	Demonstrate language arts knowledge and skills. The students will be able to:
12.01	Locate, comprehend, and evaluate key elements of oral and written information.
12.02	Draft, revise, and edit written documents using correct grammar, punctuation, and vocabulary.
12.03	Present information formally and informally for specific purposes and audiences
13.0	Solve problems using critical thinking skills, creativity, and innovation. The students will be able to:
13.01	Employ critical thinking skills independently and in teams to solve problems and make decisions.
13.02	Employ critical thinking and interpersonal skills to resolve conflicts.
13.03	Identify and document workplace performance goals and monitor progress toward those goals.
13.04	Conduct technical research to gather information necessary for decision-making.
14.0	Describe the roles within teams, work units, departments, organizations, inter-organizational systems, and the larger environment. The students will be able to
14.01	Describe the nature and types of healthcare organizations.

	14.02 Describe the effect of key organizational systems on performance and quality
	14.03 List and describe quality control systems and/or practices common to the workplace.
	14.04 Describe the impact of the global economy on healthcare organizations.
15.0	Demonstrate leadership and teamwork skills needed to accomplish team goals and objectives. The students will be able to:
	15.01 Employ leadership skills to accomplish organizational goals and objectives.
	15.02 Establish and maintain effective working relationships to accomplish objectives and tasks.
	15.03 Conduct and participate in meetings to accomplish work tasks.
	15.04 Employ mentoring skills to inspire and teach others.
	15.05 Analyze attributes and attitudes of an effective leader.
	15.06 Recognize factors and situations that may lead to conflict.
	15.07 Demonstrate effective techniques for managing team conflict.
	15.08 Demonstrate an understanding of the importance of effective interdepartmental relationships.
16.0	Demonstrate the ability to recall, dispose of, or reprocess sterile supplies/instruments. The student will be able to:
	16.01 Explain the factors that affect how long a package can be considered safe for use.
	16.02 Explain the differences between event-related, date-related, and manufacturer recommendations.
	16.03 State the methods of determining expiration dates.
	16.04 List the steps in reprocessing outdated hospital packaged items.
	16.05 List conditions that would make a product unsafe for use
	16.06 Describe the use of tamper-evident seals.
	16.07 Describe the methods of reprocessing.
	16.08 Identify standards and facility policies on the reprocessing of single-use items.
	16.09 Describe the process of recall for medical/surgical supplies.
17.0	Identify fundamentals of the supply chain. The student will be able to:

	17.01 Describe the process of supply chain management.
	17.02 Communicate with other hospitals, facilities, or company representatives for the procurement of supplies and equipment.
	17.03 Describe several different methods of procurement of supplies.
	17.04 Describe the basics of receiving and distributing items to other facilities, which must include documentation.
18.0	Demonstrate the roles and responsibilities of the sterile processing technician. The student will be able to:
	18.01 Describe professional standards related to personal hygiene and dress codes for the central supply worker to include appropriate personal protective equipment (PPE).
	18.02 Identify relevant federal, state, and local guidelines, standards, and regulations.
	18.03 Describe the organization, function, and workflow of the sterile processing department.
	18.04 Apply ergonomic considerations and appropriate body mechanics for lifting, turning, pulling, pushing, and reaching.
	18.05 Apply policies and procedures related to sterile processing functions (safety, infection control, disaster control, material safety data sheets (MSDS), incident reports, etc.).
	18.06 Apply infection control techniques following the Centers for Disease Control (CDC) guidelines.
	18.07 Describe the importance of following the device, equipment, instrument, or supply manufacturer's instructions for processing, operation, and troubleshooting.
	18.08 Demonstrate the process of stock rotation.
	18.09 Describe the processes for loaner instrumentation and equipment.
	18.10 Demonstrate the methods of case cart preparation and the utilization of preference cards.
19.0	Recognize basic principles of microbiology. The student will be able to:
	19.01 Describe terms related to microbiology and the control of microorganisms in sterile processing departments.
	19.02 Identify the main categories and life functions of microorganisms.
	19.03 Describe conditions affecting the growth of bacteria.
	19.04 Describe special methods used to destroy harmful microorganisms on fomites in the environment.
	19.05 List the conditions where microorganisms may be helpful.
	19.06 Describe how the body controls the growth of pathogenic microorganisms.

	19.07 Identify pathogenic microorganisms commonly found in sterile processing departments.
20.0	Interpret and apply medical terminology and anatomical terms as they relate to equipment and supplies issued by the sterile processing department. The student will be able to:
	20.01 Identify prefixes, roots, and suffixes for medical terms used by the sterile processing department.
	20.02 Relate anatomical concepts to surgical devices, other supplies, and equipment issued by sterile processing.
21.0	Describe how sterile processing is involved in controlling infections in healthcare facilities. The student will be able to:
	21.01 Describe nosocomial infections.
	21.02 Describe droplet, airborne, bloodborne, and contact isolation protocols.
	21.03 Describe the sterile processing responsibilities for infection control and traffic patterns when in the operating room and other departments.
	21.04 Identify proper storage and transportation standards for supplies in the facility (receivables, sterile, clean, or contaminated).
22.0	Explain the purpose of the Occupational Safety and Health Act (OSHA). The student will be able to:
	22.01 Describe how employees are protected under OSHA.
	22.02 Describe potential workplace hazards in sterile processing, such as wet floors, chemicals, fumes, gases, steam, electrical outlets, body fluids, microorganisms, sharps, and medical wastes.
	22.03 Describe the role preventive maintenance plays in patient and personnel safety in the healthcare facility.
	22.04 Explain the purpose of Florida's "Right to Know" law and its provisions.
	22.05 Describe the protocol for personal injury, including the completion of incident/occupancy reports and follow-up.
	22.06 Implement appropriate regulatory and accreditation agency patient safety guidelines.
23.0	Receive, decontaminate, clean, prepare, disinfect, and sterilize reusable items. The student will be able to:
	23.01 Describe the importance of thorough cleaning to the overall objectives of making items safe for patient use.
	23.02 Explain the importance of following manufacturers’ instructions in cleaning each item for reprocessing.
	23.03 Describe the levels of disinfection.
	23.04 Describe the cleaning processes and methods of disinfection for the environment, instruments, syringes, needles, rubber goods, and equipment.
	23.05 Describe the mechanisms of action for each disinfection method, including ultrasonic machines and washer/sterilizers.

23.06	Describe the strategies for managing difficult-to-control microorganisms that require isolation techniques and specialized decontamination methods, including Creutzfeldt-Jakob disease (CJD).
23.07	Describe the factors affecting decontamination, such as water temperature, loading procedures, water impurities, and opening and disassembling.
23.08	Distinguish correct reprocessing policies related to single-use, limited-use, and reusable items.
23.09	Describe decontamination methods for drill systems and batteries.
23.10	Describe the function of case cart washers and alternative methods of cleaning.
23.11	Describe the need for testing and monitoring all decontamination machines for proper function and cleaning agents.
23.12	Explain the importance of using correct chemicals for cleaning as it pertains to water quality, PH, filters, softeners, enzymes, and lubricants.
23.13	Describe the types, characteristics, and uses of chemicals, solutions, and gases utilized for decontamination, such as detergents, disinfectants, enzymatic, and germicides.
23.14	Demonstrate the decontamination process for canulated instruments, instruments with lumens, syringes, needles, rubber goods, and equipment.
23.15	Demonstrate flexible endoscopic leak testing, decontamination, and reprocessing.
23.16	Demonstrates decontamination and proper handling of rigid scopes.
23.17	Describes the methods of high-level disinfection, including manual processing, STERRAD processing, Medavador, and Automated Endoscopic Reprocessor (AER), that may be found in the endoscopy department.
23.18	Describe the types of sterilizers and methods of sterilization.
23.19	Describe the primary objectives in selecting the correct packaging materials for both the individual item and the sterilization method to be used.
23.20	Describe the principles of packaging.
23.21	Describe the characteristics of packaging materials in relation to sterilization methods.
23.22	Describe the principles of linen pack and tray construction/assembly.
23.23	Describe the recommended labeling methodologies.
23.24	Identify surgical procedure trays, instruments, supplies, and accessories.
23.25	Explain the principles utilized when loading different kinds of wrapped packs or packages into a sterilizer to ensure sterilization.
23.26	Recognize equipment malfunction and list corrective actions.
23.27	Demonstrate the wrapping of procedure trays, instruments, and other supplies.

	23.28 Demonstrate loading of different kinds of wrapped packs or packages into a sterilizer to be assured of sterilant penetration.
	23.29 Describe how sterile supplies should be handled.
	23.30 Demonstrate handling, transportation, and storage of clean, sterile, and nonsterile supplies, including equipment.
24.0	Demonstrate the use of sterilization process monitors, including proper utilization of appropriate chemical indicators and bacterial spore tests for all sterilizers. The student will be able to:
	24.01 Describe the types of sterilization, sterilization cycles, and parameters for each.
	24.02 Describe the importance of the manufacturer's recommendations for the safe operation of each type of sterilizer.
	24.03 Describe the methods of sterilization monitoring.
	24.04 Demonstrate the process of preparing and documenting the sterilizer load contents for each sterilizer correctly according to the manufacturer's recommendations.
	24.05 Demonstrate the operation, testing, and monitoring of sterilizers according to the manufacturer's instructions for use.
	24.06 Demonstrate the ability to interpret and document monitoring devices, printouts, and charts accurately for each sterilization system utilized.
	24.07 Identify the standards for the monitoring of all sterilizers according to facility policies.
25.0	Demonstrate the ability to identify and select appropriate instrumentation or equipment that meets the needs of the surgical specialty. The student will be able to:
	25.01 Describe instrument terminology and identify the anatomy of surgical instruments (jaws, shanks, box locks, rings, etc.).
	25.02 Describe the types and functions of instruments.
	25.03 Describe the types of instrument construction and composition.
	25.04 Demonstrate appropriate techniques for inspection and testing of instruments.
	25.05 Identify instrumentation and equipment by name and usage.
	25.06 Correctly label instrumentation and equipment.
	25.07 Demonstrate the methods of instrument identification, marking, and tracking of use.
	25.08 Demonstrate proper inspection of instrumentation prior to assembly.
	25.09 Demonstrate the assembly of various instrument sets and surgical specialty equipment.
	25.10 Demonstrate the process regarding the manufacturer's recommendations for instrument and equipment care, including handling, operation, maintenance, and troubleshooting.

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as experimental, quality, and safety procedures are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate and troubleshoot equipment/tools used to make observations. Students understand measurement error; and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

Special Notes

This program meets the Department of Health's education requirements for HIV/AIDS, Domestic Violence, and Prevention of Medical Errors. Although not a requirement for initial licensure, it is a requirement for renewal, therefore the instructor **may** provide a certificate for renewal purposes to the student verifying these requirements have been met.

The standard length of this program is 900 clock hours or 30 credit hours. This includes the Health Careers Core (90 clock hours).

If students in this program are seeking a licensure, certificate or registration through the Department of Health, please refer to 456.0635, F.S. for more information on disqualification for a license, certificate, or registration through the Department of Health.

Inquiries about a voluntary certification for sterile processing and distribution may be made to:

Healthcare Sterile Processing Association (HSPA)/
International Association of Hospital Central Service Materiel Management (IAHCSMM)
https://myhspa.org/certification/iahcsmm-certifications.html
55 West Wacker Drive, Suite 501, Chicago, IL 60601
Toll Free: 800-962-8274

Or

Certification Board for Sterile Processing and Distribution, Inc. (CBSPD)
http://www.sterileprocessing.org/cbspd.htm
1392 US Hwy 22, Suite #1, Lebanon, NJ 08865

The Core should be taken first in the program. Following the successful completion of the core, the National Health Care Foundation Skill Standards Assessment will be taken with instructor approval and the completion of a portfolio.

Career and Technical Student Organization (CTSO)

CTSOs are co-curricular career and technical student organizations providing leadership training and reinforcing specific career and technical skills. Career and Technical Student Organizations provide activities for students as an integral part of the instruction offered. Other CTSOs not listed in this curriculum framework or recognized by the Florida Department of Education are permissible provided they support student mastery over the standards and benchmarks of this curriculum framework.

Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

Florida Department of Education
Curriculum Framework

The standards and benchmarks for this program were updated for the 2026-27 academic year.

Program Title: **Health Navigator Specialist**
Career Cluster: **Health Science**

College Credit Certificate	
CIP Number	0351220800
Program Type	College Credit
Program Length	31 credit hours
CTSO	HOSA
SOC Codes (all applicable)	For program SOC codes, please see the Program and Course Tables section of the CTE Program Resources page linked below.
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml

Purpose

This certificate program is part of the Health Navigator AS degree program (1351220800).

A College Credit Certificate consists of a program of instruction of less than sixty (60) credits of college-level courses, which is part of an AS or AAS degree program and prepares students for entry into employment (Rule 6A-14.030, F.A.C.).

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Health Science career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of the Health Science career cluster.

The purpose of this program is to prepare students for employment as Health Navigators, Benefits Navigators, Community Service Specialists, or to provide supplemental training for persons previously or currently employed in these occupations.

The content includes but is not limited to communication skills, leadership skills, human relations and employability skills, principles of health insurance, introduction to computer literacy, health care organization, medical ethics, legal aspects, and advanced technical skills in a chosen health-related profession, health and safety.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Program Structure

This program is a planned sequence of instruction consisting of 31 credit hours.

When developing the course sequence for the local implementation of this program, select courses that:

- Meet the skill development requirements of the standards and benchmarks of this program.
- Where reasonable and practicable, align with programs offered by your institution or other postsecondary institutions in Florida, including:
  - Related AS and AAS degrees.
  - Baccalaureate degrees within the same career pathway and/or Federal CIP code.

Visit FloridaShines' Discover Programs website to identify other institutions that offer similar programs to review their course sequencing. Where appropriate, course alignment between institutions offering related programs can facilitate interagency student articulation.

Visit FloridaShines' Common Prerequisites Manual to identify courses that are prerequisites for admission into an upper division program. When sub-baccalaureate courses are aligned to the course admissions requirements of baccalaureate programs with the same career pathway, students can enter upper division coursework seamlessly.

Florida's Career Readiness Skills for CTE Programs

Employability Skills	
01.0	Apply academic skills to workplace scenarios.
	01.01 Use reading skills.
	01.02 Use writing skills.
	01.03 Use mathematical strategies and procedures.
	01.04 Use scientific principles and procedures.
02.0	Design a solution to an industry problem.
	02.01 Use critical thinking.
	02.02 Use creativity.
	02.03 Make sound decisions.
	02.04 Solve problems.
	02.05 Reason.
	02.06 Plan and organize.
03.0	Manage resources within an industry project
	03.01 Manage time.
	03.02 Manage money or resources.
	03.03 Manage materials.
	03.04 Manage personnel.
04.0	Oversee the subcomponents, operations and output of a technical or organizational system.
	04.01 Manage systems.
	04.02 Monitor systems.
	04.03 Improve systems.
05.0	Use information for decision making.
	05.01 Locate information.
	05.02 Organize information.
	05.03 Use information.

	05.04 Analyze information.
	05.05 Communicate information.
06.0	Apply relevant technology to workplace scenarios to aid productivity.
	06.01 Use technology.
07.0	Interpret and express interpersonal communication.
	07.01 Communicate verbally.
	07.02 Listen actively.
	07.03 Comprehend written material.
	07.04 Convey information in writing.
	07.05 Communicate nonverbally.
	07.06 Interpret nonverbal communication.
08.0	Interact with others to accomplish workplace goals.
	08.01 Collaborate with others in a team.
	08.02 Respond to customer needs.
	08.03 Exercise leadership.
	08.04 Negotiate to resolve conflict.
	08.05 Respect others.
09.0	Manage personal behavior to maximize productivity and professional growth.
	09.01 Demonstrate responsibility and self-discipline.
	09.02 Adapt and show flexibility.
	09.03 Work independently.
	09.04 Demonstrate a willingness to learn.
	09.05 Demonstrate integrity.
	09.06 Demonstrate professionalism.
	09.07 Take initiative.
	09.08 Display positive attitude.
	09.09 Take responsibility for professional growth.

Job Attainment	
10.0	Find, assess and apply to job opportunities.
10.01	Identify online job posts relevant to his or her career aspirations.
10.02	Compare and contrast the job posts' required qualifications, job duties, compensation, benefits and employers.
10.03	Define what information, documentation and writing prompts are required for the positions.
11.0	Communicate personal competence, character and fit for a job opportunity.
11.01	Develop a resume.
11.02	Write a cover letter.
11.03	Curate a professional portfolio that includes work products.
11.04	Prepare for and experience a mock job interview.
12.0	Cultivate and leverage relationships to professionally advance.
12.01	Request a signed reference letter, letter of recommendation and/or an online skill/professionalism endorsement.
12.02	Develop a plan to cultivate a professional digital footprint.
12.03	Develop a networking plan for a specific industry of interest.

Standards

After successfully completing this program, the student will be able to perform the following:

01.0 Identify and apply basic knowledge of aspects of health and wellness.
02.0 Demonstrate knowledge of various topics pertinent to the five core disciplines of public health.
03.0 Identify and apply U.S healthcare delivery and fiscal resources.
04.0 Demonstrate ability to work as a health navigator or community health worker.
05.0 Demonstrate knowledge of current events in the field of public health.
06.0 Demonstrate knowledge of health communication and its impact on health outcomes.
07.0 Define and describe aging, long-term care, and types of residences.
08.0 Demonstrate the use of evidence to draw conclusions about disease etiology.
09.0 Demonstrate knowledge of the three primary levels of prevention.
10.0 Demonstrate knowledge of how the insured and uninsured interact with the U.S. healthcare system.

Florida Department of Education
Student Performance Standards

Program Title: **Health Navigator Specialist**
CIP Number: **0351220800**
Program Length: **31 credit hours**

This certificate program is part of the Health Navigator AS program (1351220800). At the completion of this program, the student will be able to:	
01.0	Identify and apply basic knowledge of aspects of health and wellness. The student will be able to:
01.01	Discuss integrating healthy living choices into one's lifestyle.
01.02	Define how physical fitness, mental health, nutrition, substance use and abuse, and family influences connect with the concept of patient wellness.
01.03	Describe the impact of social media and time in the digital environment on physical and mental health and wellness.
01.04	Identify the risk factors for cardiovascular disease.
01.05	Describe the effects of tobacco, smoking, and vaping.
01.06	Describe various fitness methods to improve health.
01.07	Discuss effects of nutritional impacts on health and wellness.
01.08	Explain body composition and achieving a healthy weight.
01.09	Describe the types of stress, its impacts on health and wellness, and stress management strategies.
01.10	Discuss substance use and abuse in society.
01.11	Describe the effects of chronic disease on the human body.
02.0	Demonstrate knowledge of various topics pertinent to the five core disciplines of public health. The student will be able to:
02.01	Define public health.
02.02	Describe how public health strategies and practices contribute to achieving local, state, and national health objectives.
02.03	Summarize the historical milestones in public health.
02.04	Identify and describe the following five core disciplines of public health: epidemiology/biostatistics, community/family health, environmental/occupational health, health policy/management, and global health.

	02.05 Identify elements of public health.
	02.06 Explain the concepts of prevention, detection, control of infectious and chronic conditions, and the factors that contribute to differences in population-level health indicators.
	02.07 Compare and contrast examples of major domestic and international public health issues.
03.0	Identify and apply knowledge of the U.S. healthcare delivery and fiscal resources. The student will be able to:
	03.01 Describe the changing landscape of health services and its relevance on the existing healthcare system, facilities, and services.
	03.02 Explain the impacts of public policies on healthcare, such as availability of healthcare services, cost, delivery, and financial implications.
	03.03 Describe the various healthcare organizations and service delivery options.
	03.04 Identify the health professions and explain the role of each and their licensing/educational requirements.
	03.05 Compare and contrast the healthcare delivery systems of the U.S. with industrialized nations.
	03.06 Describe the array of healthcare career options.
	03.07 Discuss the various sources and uses of funds for healthcare.
04.0	Demonstrate ability to work as a health navigator or community health worker. The student will be able to:
	04.01 Identify community agencies where health navigators are employed.
	04.02 Complete a field experience that provides descriptions of primary duties, annual salary, and interpersonal collaboration.
	04.03 Demonstrate an understanding and expectation of the essential duties of health navigators.
	04.04 Describe barriers to care faced by healthcare providers, patients, and consumers of the placement site.
	04.05 Discuss the core health activities of the placement site.
	04.06 Demonstrate an understanding of how placement sites work with local, county, state, and federal agencies.
	04.07 Evaluate the role of a health navigator in patient healthcare.
	04.08 Demonstrate communication techniques to assess patient health and needs.
	04.09 Apply health literacy principles and adapt instruction and training, as appropriate, to patients, groups, and populations.
05.0	Demonstrate knowledge of current events in the field of public health. The student will be able to:

	05.01	Identify sources and platforms (e.g., news, media, and governmental) used to communicate public health events to the general public.
	05.02	Describe the implications of current events on public health.
	05.03	Discuss concerns related to how public health information is and presented to the public.
	05.04	Recognize how reporting of global events (e.g., epidemics, regime change, and weather events) has the potential to impact other areas.
	05.05	Locate emerging public health trends.
	05.06	Explain the etiology of emerging public health trends discussed throughout the course.
	05.07	Discuss legislation designed to protect the public's right to information during major health events (epidemics, terrorism, natural disasters).
06.0	Demonstrate knowledge of health communication and its impact on health outcomes. The student will be able to:	
	06.01	Describe key concepts and skills used to identify and measure individuals with reduced health literacy.
	06.02	Explain how understanding health literacy is a determinant of health.
	06.03	Advocate for patients, ensuring that their voices are heard and respected in healthcare decision-making.
	06.04	Discuss basic constructs of theories used in behavior change and persuasion.
	06.05	Classify health communication programs based on disease type (e.g., chronic vs. infectious).
	06.06	Determine communication methods to be used in specific settings (e.g., healthcare, school, and workplace).
	06.07	Discuss risks and rewards associated with the use of technology-based applications in healthcare.
07.0	Define and describe aging, long-term care, and types of residences. The student will be able to:	
	07.01	Describe demographic characteristics of an aging population.
	07.02	Explain psychological factors associated with aging.
	07.03	Describe the phenomenon of increasing life expectancy and the impact on the U.S. healthcare system, economy, and society.
	07.04	Discuss health promotion, disease prevention, and end-of-life planning for aging populations.
	07.05	Compare and contrast aging populations from a historical perspective.
	07.06	Describe the levels of care and types of residences for different health needs.

08.0	Demonstrate the use of evidence to draw conclusions about disease etiology. The student will be able to:
08.01	Define evidence-based practices in public health.
08.02	Identify evidence-based practices in disease etiology, the benefits, and recommendations for prevention.
08.03	Discuss health information concepts related to economic, legal, and social issues.
08.04	Investigate a problem by using evidence-based practice skills to define a health problem and determine the information that is needed to make an educated decision.
08.05	Locate and evaluate online health information to determine that appropriate audiences are reached using content that is patient-specific.
09.0	Demonstrate knowledge of the three primary levels of prevention. The student will be able to:
09.01	Discuss implementation methods of prevention used in public health, including education, motivation, and obligation.
09.02	Describe the three levels of prevention in public health, including primary, secondary, and tertiary.
09.03	Explain how preventative methods can be used throughout the lifespan.
09.04	Identify individual and community needs to connect available resources to distressed areas and prevent adverse effects.
09.05	Summarize specific primary prevention methods, including vaccinations, exercise, nutrition counseling, and birth control.
09.06	Summarize secondary prevention methods, including screening for risk factors of disease and injury prevention.
09.07	Summarize specific tertiary prevention methods, including treatment to control symptoms and prevent complications.
10.0	Demonstrate knowledge of how the insured and uninsured interact with the U.S. healthcare system. The student will be able to:
10.01	Identify types of health insurance (e.g., Medicaid, Medicare and Medigap, exchanges, and employment-based).
10.02	Accurately describe the history, advantages, and disadvantages of the development of the U.S. healthcare system.
10.03	Explain the relationship between essential services (e.g., preventive care, emergency care, choice of providers, institutional options, prescription drug options, and coverage decisions).
10.04	Describe issues associated with having access to healthcare in the absence of health insurance and consequences of the decision not to obtain health insurance.
10.05	Explain goals, limitations, and basic guidelines for eligibility for workers' compensation.
10.06	Discuss the economic implications related to access and affordability of healthcare coverage.

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools, and equipment, as well as experimental, quality, and safety procedures, are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate, and troubleshoot equipment/tools used to make observations. Students understand measurement error and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

Career and Technical Student Organization (CTSO)

CTSOs are co-curricular career and technical student organizations providing leadership training and reinforcing specific career and technical skills. Career and Technical Student Organizations provide activities for students as an integral part of the instruction offered. Other CTSOs not listed in this curriculum framework or recognized by the Florida Department of Education are permissible provided they support student mastery over the standards and benchmarks of this curriculum framework.

Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology, and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

Florida Department of Education
Curriculum Framework

The standards and benchmarks for this program were updated for the 2026-27 academic year.

Program Title: **Biotechnology Specialist**
Career Cluster: **Health Science**

College Credit Certificate	
CIP Number	0641010100
Program Type	College Credit Certificate (CCC)
Program Length	19 credit hours
CTSO	HOSA, SkillsUSA
SOC Codes (all applicable)	For program SOC codes, please see the Program and Course Tables section of the CTE Program Resources page linked below.
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml

Purpose

This certificate program is part of the Biotechnology Laboratory Technology AS degree program (1341010100).

A College Credit Certificate consists of a program of instruction of less than sixty (60) credits of college-level courses, which is part of an AS or AAS degree program and prepares students for entry into employment (Rule 6A-14.030, F.A.C.).

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Health Science career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of the Health Science career cluster.

The content includes but is not limited to broad biology and chemistry concepts, algebraic analysis, documentation procedures, basic laboratory techniques and concepts, as well as biohazard and safety procedures.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Program Structure

When developing the course sequence for the local implementation of this program, select courses that:

- Meet the skill development requirements of the standards and benchmarks of this program.
- Where reasonable and practicable, align with programs offered by your institution or other postsecondary institutions in Florida, including:
    - Related AS and AAS degrees.
    - Baccalaureate degrees within the same career pathway and/or Federal CIP code.

Visit FloridaShines' Discover Programs website to identify other institutions that offer similar programs to review their course sequencing. Where appropriate, course alignment between institutions offering related programs can facilitate interagency student articulation.

Visit FloridaShines' Common Prerequisites Manual to identify courses that are prerequisites for admission into an upper division program. When sub-baccalaureate courses are aligned to the course admissions requirements of baccalaureate programs with the same career pathway, students can enter upper division coursework seamlessly.

Florida's Career Readiness Skills for CTE Programs

Employability Skills	
01.0	Apply academic skills to workplace scenarios.
01.01	Use reading skills.
01.02	Use writing skills.
01.03	Use mathematical strategies and procedures.
01.04	Use scientific principles and procedures.
02.0	Design a solution to an industry problem.
02.01	Use critical thinking.
02.02	Use creativity.
02.03	Make sound decisions.
02.04	Solve problems.
02.05	Reason.
02.06	Plan and organize.
03.0	Manage resources within an industry project
03.01	Manage time.
03.02	Manage money or resources.
03.03	Manage materials.
03.04	Manage personnel.
04.0	Oversee the subcomponents, operations and output of a technical or organizational system.
04.01	Manage systems.
04.02	Monitor systems.
04.03	Improve systems.
05.0	Use information for decision making.
05.01	Locate information.
05.02	Organize information.
05.03	Use information.

	05.04 Analyze information.
	05.05 Communicate information.
06.0	Apply relevant technology to workplace scenarios to aid productivity.
	06.01 Use technology.
07.0	Interpret and express interpersonal communication.
	07.01 Communicate verbally.
	07.02 Listen actively.
	07.03 Comprehend written material.
	07.04 Convey information in writing.
	07.05 Communicate nonverbally.
	07.06 Interpret nonverbal communication.
08.0	Interact with others to accomplish workplace goals.
	08.01 Collaborate with others in a team.
	08.02 Respond to customer needs.
	08.03 Exercise leadership.
	08.04 Negotiate to resolve conflict.
	08.05 Respect others.
09.0	Manage personal behavior to maximize productivity and professional growth.
	09.01 Demonstrate responsibility and self-discipline.
	09.02 Adapt and show flexibility.
	09.03 Work independently.
	09.04 Demonstrate a willingness to learn.
	09.05 Demonstrate integrity.
	09.06 Demonstrate professionalism.
	09.07 Take initiative.
	09.08 Display positive attitude.
	09.09 Take responsibility for professional growth.

Job Attainment	
10.0	Find, assess and apply to job opportunities.
10.01	Identify online job posts relevant to his or her career aspirations.
10.02	Compare and contrast the job posts' required qualifications, job duties, compensation, benefits and employers.
10.03	Define what information, documentation and writing prompts are required for the positions.
11.0	Communicate personal competence, character and fit for a job opportunity.
11.01	Develop a resume.
11.02	Write a cover letter.
11.03	Curate a professional portfolio that includes work products.
11.04	Prepare for and experience a mock job interview.
12.0	Cultivate and leverage relationships to professionally advance.
12.01	Request a signed reference letter, letter of recommendation and/or an online skill/professionalism endorsement.
12.02	Develop a plan to cultivate a professional digital footprint.
12.03	Develop a networking plan for a specific industry of interest.

Standards

After successfully completing this program, the student will be able to perform the following:

01.0 Apply communication skills.
02.0 Follow laboratory safety requirements.
03.0 Apply basic laboratory skills.
04.0 Follow regulatory compliance.
05.0 Demonstrate appropriate decision-making and problem-solving techniques.
06.0 Apply advanced laboratory skills.
07.0 Implement quality assurance/control measurements.
08.0 Recognize facility and equipment maintenance.

Florida Department of Education
Student Performance Standards

Program Title: **Biotechnology Specialist**
CIP Number: **0641010100**
Program Length: **19 credit hours**

This certificate program is part of the Biotechnology Laboratory Technology AS degree program (1341010100). At the completion of this program, the student will be able to:	
01.0	Apply communication skills. The student will be able to:
01.01	Comprehend and use correct scientific, technical, and medical vocabulary.
01.02	Follow experimental protocols, laboratory protocols, and scientific literature.
01.03	Maintain accurate laboratory records in notebooks, batch records, or other approved media.
01.04	Recognize the scientific process, including formulating hypotheses.
02.0	Follow laboratory safety requirements. The student will be able to:
02.01	Locate first aid supplies, eye wash station, emergency shower, co-worker contact, medical information, emergency and chemical protection, and evacuation plan.
02.02	Follow correct safety procedures, guidelines, and chemical hygiene plans.
02.03	Follow the required environmental health, safety, and laboratory training.
02.04	Handle, store, and dispose of hazardous materials per appropriate MSDS, other safety guidelines, Worker Protection Standards (WPS), and/or appropriate regulatory guidelines (i.e., state, federal, local, accreditation, etc.).
02.05	Follow standard precautions for biological pathogens, using proper handling and disposal methods, and follow guidelines of contamination control.
02.06	Identify procedures for declaring a laboratory emergency and the appropriate institutional response procedures.
03.0	Apply basic laboratory skills. The student will be able to:
03.01	Obtain and read protocols, follow test procedures, use standard operating procedures (SOPs), and follow equipment manuals.
03.02	Clean, organize, and sterilize materials and laboratory instruments when required.
03.03	Organize supply inventory, date and label reagents, and store promptly upon arrival.
03.04	Demonstrate knowledge of aseptic techniques and practice procedures such as hand-washing and specimen isolation.

	03.05 Master titration/pipetting techniques and measurement of volume/weights.
	03.06 Perform basic calculations, unit conversions, graphing of data, and statistical analysis.
	03.07 Calculate and prepare dilution series.
	03.08 Prepare solutions and reagents for laboratory use.
	03.09 Collect and set up samples for analysis.
	03.10 Perform general laboratory tests, including setting up equipment and performing/documenting tests and results.
	03.11 Demonstrate knowledge of chemical cross-contamination control between reagents from weighing implements, storage containers, and media.
04.0	Follow regulatory compliance. The student will be able to:
	04.01 Follow guidelines from the appropriate regulatory, accreditation, and/or certification agencies, such as FDA, OSHA, USDA, NIH, NR, DOT, EPA, CDC, ISO/IEC, and NRC.
	04.02 Comply with principles using current Good Experimental Practices and quality improvement systems (e.g., GXP; GLP, GMP, GCP).
05.0	Demonstrate appropriate decision-making and problem-solving techniques. The student will be able to:
	05.01 Make decisions based on facts, data, and analyses.
	05.02 Diagnose problems, their urgency and causes, and maintain documentation as appropriate.
06.0	Apply advanced laboratory skills. The student will be able to:
	06.01 Apply microbiology skills, such as plating and aseptic techniques, growth on differential and selective media, and staining procedures.
	06.02 Utilize molecular biology techniques, such as cloning and transformation.
	06.03 Apply various molecular biology techniques, such as DNA, RNA, protein, isolation, quantitation, amplification, characterization, molecular stability, electrophoresis, hybridization techniques, and construction of recombinant vectors.
	06.04 Perform translation assays, construction of DNA libraries, and labeling techniques.
	06.05 Compare chemical assays such as measuring turbidity, viscosity, density, quantitative analysis, distillation techniques, titration techniques, employing dyes and indicators, and lyophilization.
07.0	Implement quality assurance/control measurements. The student will be able to:
	07.01 Perform quality tests, follow SOPs, and complete batch records.
	07.02 Verify test standards and maintain Quality Assurance records.

	07.03 Archive samples and documents.
	07.04 Inspect and verify the integrity of product, procedure, and specimen.
08.0	Recognize facility and equipment maintenance. The student will be able to:
	08.01 Describe the essential conditions for the facility and equipment for laboratory maintenance (e.g., growth chamber, laboratory, greenhouse, storage room, animal room, freezers, or manufacturing site).
	08.02 Notify appropriate personnel when required conditions are not met.
	08.03 Clean work area according to SOPs and/or facility requirements.
	08.04 Label equipment following facility requirements.
	08.05 Check for equipment calibration and equipment logs.
	08.06 Operate laboratory equipment and instrumentation after familiarization with manuals and/or training.

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as experimental, quality, and safety procedures are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate, and troubleshoot equipment/tools used to make observations. Students understand measurement error and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

Career and Technical Student Organization (CTSO)

CTSOs are co-curricular career and technical student organizations providing leadership training and reinforcing specific career and technical skills. Career and Technical Student Organizations provide activities for students as an integral part of the instruction offered. Other CTSOs not listed in this curriculum framework or recognized by the Florida Department of Education are permissible provided they support student mastery over the standards and benchmarks of this curriculum framework.

Accommodations

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Florida Department of Education
Curriculum Framework

The standards and benchmarks for this program were updated for the 2026-27 academic year.

Program Title: **Biotechnology Laboratory Technology**
Career Cluster: **Health Science**

Associate in Science	
CIP Number	1341010100
Program Type	College Credit
Program Length	61 credit hours
CTSO	HOSA; SkillsUSA
SOC Codes (all applicable)	For program SOC codes, please see the Program and Course Tables section of the CTE Program Resources page linked below.
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml

Purpose

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Health Science career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of Health Science career cluster.

This program is designed to prepare students for employment as Biotechnology Research Technicians, Biological Technicians, cell culture technicians, or biotechnology manufacturing technicians, and/or to supply supplemental training for persons previously or currently employed in these occupations.

The content includes, but is not limited to, broad biology and chemistry concepts, algebraic and statistical analysis, basic microbiology concepts, biohazard and safety procedures, human anatomy and physiology or botany, core biotechnical laboratory techniques, and industry workplace experience. It also includes components designed to enhance critical thinking and technical communication skills.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Program Structure

This program is a planned sequence of instruction consisting of 61 credit hours.

When developing the course sequence for the local implementation of this program, select courses that:

- Meet the skill development requirements of the standards and benchmarks of this program.
- Meet the general education core course requirements of Rule 6A-14.0303, Florida Administrative Code.
- Where reasonable and practicable, align with programs offered by your institution or other postsecondary institutions in Florida, including:
    - Related CCC and ATD credentials.
    - Baccalaureate degrees within the same career pathway and/or Federal CIP code.

Visit FloridaShines' Discover Programs website to identify other institutions that offer similar programs to review their course sequencing. Where appropriate, course alignment between institutions offering related programs can facilitate interagency student articulation.

Visit FloridaShines' Common Prerequisites Manual to identify courses that are prerequisites for admission into an upper division program. When sub-baccalaureate courses are aligned to the course admissions requirements of baccalaureate programs with the same career pathway, students can enter upper division coursework seamlessly.

Florida's Career Readiness Skills for CTE Programs

Employability Skills	
01.0	Apply academic skills to workplace scenarios.
01.01	Use reading skills.
01.02	Use writing skills.
01.03	Use mathematical strategies and procedures.
01.04	Use scientific principles and procedures.
02.0	Design a solution to an industry problem.
02.01	Use critical thinking.
02.02	Use creativity.
02.03	Make sound decisions.
02.04	Solve problems.
02.05	Reason.
02.06	Plan and organize.
03.0	Manage resources within an industry project
03.01	Manage time.
03.02	Manage money or resources.
03.03	Manage materials.
03.04	Manage personnel.
04.0	Oversee the subcomponents, operations and output of a technical or organizational system.
04.01	Manage systems.
04.02	Monitor systems.
04.03	Improve systems.
05.0	Use information for decision making.
05.01	Locate information.
05.02	Organize information.
05.03	Use information.

	05.04 Analyze information.
	05.05 Communicate information.
06.0	Apply relevant technology to workplace scenarios to aid productivity.
	06.01 Use technology.
07.0	Interpret and express interpersonal communication.
	07.01 Communicate verbally.
	07.02 Listen actively.
	07.03 Comprehend written material.
	07.04 Convey information in writing.
	07.05 Communicate nonverbally.
	07.06 Interpret nonverbal communication.
08.0	Interact with others to accomplish workplace goals.
	08.01 Collaborate with others in a team.
	08.02 Respond to customer needs.
	08.03 Exercise leadership.
	08.04 Negotiate to resolve conflict.
	08.05 Respect others.
09.0	Manage personal behavior to maximize productivity and professional growth.
	09.01 Demonstrate responsibility and self-discipline.
	09.02 Adapt and show flexibility.
	09.03 Work independently.
	09.04 Demonstrate a willingness to learn.
	09.05 Demonstrate integrity.
	09.06 Demonstrate professionalism.
	09.07 Take initiative.
	09.08 Display positive attitude.
	09.09 Take responsibility for professional growth.

Job Attainment	
10.0	Find, assess and apply to job opportunities.
10.01	Identify online job posts relevant to his or her career aspirations.
10.02	Compare and contrast the job posts' required qualifications, job duties, compensation, benefits and employers.
10.03	Define what information, documentation and writing prompts are required for the positions.
11.0	Communicate personal competence, character and fit for a job opportunity.
11.01	Develop a resume.
11.02	Write a cover letter.
11.03	Curate a professional portfolio that includes work products.
11.04	Prepare for and experience a mock job interview.
12.0	Cultivate and leverage relationships to professionally advance.
12.01	Request a signed reference letter, letter of recommendation and/or an online skill/professionalism endorsement.
12.02	Develop a plan to cultivate a professional digital footprint.
12.03	Develop a networking plan for a specific industry of interest.

Standards

After successfully completing this program, the student will be able to perform the following:

01.0 Apply communication skills.
02.0 Follow laboratory safety requirements.
03.0 Apply basic laboratory skills.
04.0 Follow regulatory compliance.
05.0 Demonstrate appropriate decision-making and problem-solving techniques.
06.0 Apply advanced laboratory skills.
07.0 Implement quality assurance/control measurements.
08.0 Recognize facility and equipment maintenance.
09.0 Outline basic skills in bioinformatics.

Florida Department of Education
Student Performance Standards

Program Title: **Biotechnology Laboratory Technology**
CIP Number: **1341010100**
Program Length: **61 credit hours**

At the completion of this program, the student will be able to:	
01.0	Apply communication skills. The student will be able to:
01.01	Prepare professional oral and written presentations.
01.02	Comprehend and use correct scientific, technical, and medical vocabulary.
01.03	Follow experimental protocols, laboratory protocols, and scientific literature.
01.04	Identify experimental controls.
01.05	Follow laboratory protocols, standard operating procedures (SOP), and scientific techniques.
01.06	Maintain accurate laboratory records in notebooks, batch records, or other approved media.
01.07	Explore computerized databases, such as the National Center for Biotechnology Information (NCBI), and identify resources necessary for biotechnology.
01.08	Recognize differences between peer-reviewed scientific references and non-scientific sources.
01.09	Recognize the scientific process, including formulating hypotheses.
01.10	Illustrate an ethical application of artificial intelligence tools.
02.0	Follow laboratory safety requirements. The student will be able to:
02.01	Locate first aid supplies, eye wash station, emergency shower, co-worker contact, medical information, emergency and chemical protection, and evacuation plan.
02.02	Follow correct safety procedures, guidelines, and chemical hygiene plans.
02.03	Follow required environmental health, safety, and laboratory training.
02.04	Handle, store, and dispose of hazardous materials per appropriate MSDS, other safety guidelines, Worker Protection Standards (WPS), and/or appropriate regulatory guidelines (i.e., state, federal, local, accreditation, etc.).
02.05	Follow standard precautions for biological pathogens using proper handling and disposal methods and follow the guidelines of contamination control.

	02.06 Identify procedures for declaring a laboratory emergency and the appropriate institutional response procedures.
03.0	Apply basic laboratory skills. The student will be able to:
	03.01 Obtain and read protocols, follow test procedures, use standard operating procedures (SOPs), and follow equipment manuals.
	03.02 Prioritize and perform multiple tasks in a timely manner based upon priorities communicated by supervisor.
	03.03 Clean, organize, and sterilize materials and laboratory instruments when required.
	03.04 Organize supply inventory, date and label reagents, and store promptly upon arrival.
	03.05 Demonstrate knowledge of aseptic techniques and practice procedures such as hand-washing and specimen isolation.
	03.06 Master titration/pipetting techniques and measurement of volume/weights.
	03.07 Perform basic calculations, unit conversions, graphing of data, and statistical analysis.
	03.08 Calculate and prepare dilution series.
	03.09 Prepare solutions and reagents for laboratory use.
	03.10 Monitor physical properties of reagents, buffers, media, and solutions, and determine optimum conditions for use.
	03.11 Obtain and review appropriate procedures and test forms, prepare for laboratory inspections, and respond to the reports.
	03.12 Collect and set up samples for analysis.
	03.13 Perform general laboratory tests, including setup equipment, and perform/document tests and results.
	03.14 Demonstrate knowledge of chemical cross-contamination control between reagents from weighing implements, storage containers, and media.
	03.15 Make estimations and approximations and judge the reasonableness of the result.
04.0	Follow regulatory compliance. The student will be able to:
	04.01 Follow guidelines from the appropriate regulatory, accreditation, and/or certification agencies, such as FDA, OSHA, USDA, NIH, NR, DOT, EPA, CDC, ISO/IEC, and NRC.
	04.02 Comply with principles using current Good Experimental Practices and quality improvement systems (e.g., GXP; GLP, GMP, GCP).
05.0	Demonstrate appropriate decision-making and problem-solving techniques. The student will be able to:
	05.01 Identify decisions and compare alternative techniques.

	05.02 Make decisions based on facts, data, and analyses.
	05.03 Evaluate the experimental outcome and draw conclusions.
	05.04 Diagnose problems, their urgency and causes, and maintain documentation as appropriate.
	05.05 Determine potential alternative hypotheses and further action(s).
06.0	Apply advanced laboratory skills. The student will be able to:
	06.01 Apply microbiology skills such as plating and aseptic techniques, growth on differential and selective media, and staining procedures.
	06.02 Utilize molecular biology techniques, such as cloning and transformation.
	06.03 Perform immunological techniques, such as enzyme-linked immunosorbent assays (ELISA), use of monoclonal and polyclonal antibodies, Western blot techniques, and conduct enzyme activity assays.
	06.04 Apply various molecular biology techniques, such as DNA, RNA, protein, isolation, quantitation, amplification, characterization, molecular stability, electrophoresis, hybridization techniques, and construction of recombinant vectors.
	06.05 Perform translation assays, construction of DNA libraries, and labeling techniques.
	06.06 Compare chemical assays, such as measuring turbidity, viscosity, density, quantitative analysis, distillation techniques, titration techniques, employing dyes and indicators, and lyophilization.
	06.07 Demonstrate knowledge of instrument-based separation, such as various chromatography techniques and other separation methodologies (e.g., FACS).
	06.08 Demonstrate knowledge of various techniques associated with animal, plant, and/or microbial cell culture, including isolation, maintenance, characterization, and storage of pure cultures.
	06.09 Summarize the principles underlying spectroscopic analysis.
	06.10 Explain the usage of emerging technologies in biotechnology.
07.0	Implement quality assurance/control measurements. The student will be able to:
	07.01 Perform quality tests, follow SOPs, and complete batch records.
	07.02 Verify test standards and maintain Quality Assurance records.
	07.03 Archive samples and documents.
	07.04 Inspect and verify the integrity of product, procedure, and specimen.
	07.05 Explain the role of statistical trend analysis for the release of the final product.
	07.06 Investigate complaints and take corrective action.

08.0	Recognize facility and equipment maintenance. The student will be able to:
08.01	Describe the essential conditions for the facility and equipment for laboratory maintenance (e.g., growth chamber, laboratory, greenhouse, storage room, animal room, freezers, or manufacturing site).
08.02	Notify appropriate personnel when required conditions in the facility are not met.
08.03	Clean work area according to SOPs and/or facility requirements.
08.04	Label equipment following facility requirements.
08.05	Check equipment calibration and equipment logs.
08.06	Operate laboratory equipment and instrumentation after familiarization with manuals and/or training.
09.0	Outline basic skills in bioinformatics. The student will be able to:
09.01	Explain current methods of DNA sequencing and explain parameters that optimize DNA sequence quality.
09.02	Identify and annotate molecular sequences using genomic databases (e.g., Basic Local Alignment Search Tool – BLAST).
09.03	Explain single nucleotide polymorphisms (SNPs), provide examples, and discuss their utility.
09.04	Use software for experimental planning and analysis (e.g., polymerase chain reaction primer design, melting temperature analysis, gene sequence assembly, *in silico* restriction endonuclease digestions).
09.05	Demonstrate the navigation and use of the resources available in the National Center for Biotechnology Information (NCBI) databases and perform advanced queries.
09.06	Explain the concept of phylogenetic trees using molecular data.

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as, experimental, quality, and safety procedures are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate and troubleshoot equipment/tools used to make observations. Students understand measurement error and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

Special Notes

This program focuses on broad, transferable skills and stresses understanding and demonstration of the following elements of the health care industry; planning, management, finance, technical and production skills, underlying principles of technology, labor issues, community issues and health, safety, and environmental issues.

This program meets the Department of Health's education requirements for HIV/AIDS, Domestic Violence and Prevention of Medical Errors. Although not a requirement for initial licensure, it is a requirement for renewal, therefore the instructor **may** provide a certificate for renewal purposes to the student verifying these requirements have been met.

Programs using live specimens must follow established regulatory guidelines and ethical standards for their use, growth, propagation, and maintenance.

General Education Course Requirements for AS and AAS Degrees

State Board of Education Rule 6A-14.030(4), F.A.C., identifies 15 credit hours as the minimum amount of general education coursework required in the Associate of Science (AS) degree and the Associate of Applied Science (AAS) degree. In addition, Rule 6A-14.0303, F.A.C., implements s. 1007.25, F.S., and requires students entering a technical education degree program in the 2022-2023 academic year, and thereafter, to complete at least one identified core course in each subject area as part of the general education course requirements (15 credit hours total) before a degree is awarded) The core subject areas include:

- Communication.
- Humanities.
- Mathematics.
- Natural Sciences.
- Social Sciences.

Career and Technical Student Organization (CTSO)

CTSOs are co-curricular career and technical student organizations providing leadership training and reinforcing specific career and technical skills. Career and Technical Student Organizations provide activities for students as an integral part of the instruction offered. Other CTSOs not listed in

this curriculum framework or recognized by the Florida Department of Education are permissible provided they support student mastery over the standards and benchmarks of this curriculum framework.

Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

Certificate Programs

A College Credit Certificate consists of a program of instruction of less than sixty (60) credits of college-level courses, which is part of an AS or AAS degree program and prepares students for entry into employment (Rule 6A-14.030, F.A.C.). This AS degree program includes the following College Credit Certificates:

Biotechnology Laboratory Specialist (0341010101) – 30 credit hours
Biotechnology Specialist (0641010100) – 19 credit hours

Standards for the above certificate programs are contained in separate curriculum frameworks.

Florida Department of Education
Curriculum Framework

The standards and benchmarks for this program were updated for the 2026-27 academic year.

Program Title: **Dental Assisting Technology and Management**
Career Cluster: **Health Science**

Associate in Science	
CIP Number	1351060104
Program Type	College Credit
Program Length	70 credit hours
CTSO	HOSA
SOC Codes (all applicable)	For program SOC codes, please see the Program and Course Tables section of the CTE Program Resources page linked below.
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml

Purpose

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Health Science career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of Health Science career cluster.

The program is designed to prepare students for employment as dental assistants 66002, dental auxiliaries as practice managers, educational managers for dental companies, and dental assisting educators. The program will prepare students for the Dental Assisting National Board Examination as well as state requirements. The program should meet the requirements of the Commission on Dental Accreditation of the American Dental Association and standards recommended by the Florida Board of Dentistry.

The content includes but is not limited to dental and general anatomy, dental terminology, nutrition, microbiology, dental pharmacology and anesthesia, chairside assisting, expanded functions, dental office emergencies/CPR, dental radiography, maintenance and asepsis of dental operatory and instruments, dental instrument and equipment utilization, dental specialty procedures, basic dental laboratory procedures, dental materials, preventive dentistry, employability skills, leadership and human relations skills, ethics and jurisprudence, dental office and patient management, general studies, physical sciences, business principles, educational leadership, and communication skills.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Program Structure

This program is a planned sequence of instruction consisting of 70 credit hours.

When developing the course sequence for the local implementation of this program, select courses that:

- Meet the skill development requirements of the standards and benchmarks of this program.
- Meet the general education core course requirements of Rule 6A-14.0303, Florida Administrative Code.
- Where reasonable and practicable, align with programs offered by your institution or other postsecondary institutions in Florida, including:
    - Related CCC and ATD credentials.
    - Baccalaureate degrees within the same career pathway and/or Federal CIP code.

Visit FloridaShines' Discover Programs website to identify other institutions that offer similar programs to review their course sequencing. Where appropriate, course alignment between institutions offering related programs can facilitate interagency student articulation.

Visit FloridaShines' Common Prerequisites Manual to identify courses that are prerequisites for admission into an upper division program. When sub-baccalaureate courses are aligned to the course admissions requirements of baccalaureate programs with the same career pathway, students can enter upper division coursework seamlessly.

Florida's Career Readiness Skills for CTE Programs

Employability Skills	
01.0	Apply academic skills to workplace scenarios.
01.01	Use reading skills.
01.02	Use writing skills.
01.03	Use mathematical strategies and procedures.
01.04	Use scientific principles and procedures.
02.0	Design a solution to an industry problem.
02.01	Use critical thinking.
02.02	Use creativity.
02.03	Make sound decisions.
02.04	Solve problems.
02.05	Reason.
02.06	Plan and organize.
03.0	Manage resources within an industry project
03.01	Manage time.
03.02	Manage money or resources.
03.03	Manage materials.
03.04	Manage personnel.
04.0	Oversee the subcomponents, operations and output of a technical or organizational system.
04.01	Manage systems.
04.02	Monitor systems.
04.03	Improve systems.
05.0	Use information for decision making.
05.01	Locate information.
05.02	Organize information.
05.03	Use information.

	05.04 Analyze information.
	05.05 Communicate information.
06.0	Apply relevant technology to workplace scenarios to aid productivity.
	06.01 Use technology.
07.0	Interpret and express interpersonal communication.
	07.01 Communicate verbally.
	07.02 Listen actively.
	07.03 Comprehend written material.
	07.04 Convey information in writing.
	07.05 Communicate nonverbally.
	07.06 Interpret nonverbal communication.
08.0	Interact with others to accomplish workplace goals.
	08.01 Collaborate with others in a team.
	08.02 Respond to customer needs.
	08.03 Exercise leadership.
	08.04 Negotiate to resolve conflict.
	08.05 Respect others.
09.0	Manage personal behavior to maximize productivity and professional growth.
	09.01 Demonstrate responsibility and self-discipline.
	09.02 Adapt and show flexibility.
	09.03 Work independently.
	09.04 Demonstrate a willingness to learn.
	09.05 Demonstrate integrity.
	09.06 Demonstrate professionalism.
	09.07 Take initiative.
	09.08 Display positive attitude.
	09.09 Take responsibility for professional growth.

Job Attainment	
10.0	Find, assess and apply to job opportunities.
10.01	Identify online job posts relevant to his or her career aspirations.
10.02	Compare and contrast the job posts' required qualifications, job duties, compensation, benefits and employers.
10.03	Define what information, documentation and writing prompts are required for the positions.
11.0	Communicate personal competence, character and fit for a job opportunity.
11.01	Develop a resume.
11.02	Write a cover letter.
11.03	Curate a professional portfolio that includes work products.
11.04	Prepare for and experience a mock job interview.
12.0	Cultivate and leverage relationships to professionally advance.
12.01	Request a signed reference letter, letter of recommendation and/or an online skill/professionalism endorsement.
12.02	Develop a plan to cultivate a professional digital footprint.
12.03	Develop a networking plan for a specific industry of interest.

Standards

After successfully completing this program, the student will be able to perform the following:

01.0 Demonstrate knowledge of the dental health care delivery system and dental health occupations.
02.0 Use oral, written, and electronic communication skills with professional etiquette in creating, expressing, and interpreting information and ideas.
03.0 Describe the legal and ethical responsibilities of the dental health care worker.
04.0 Demonstrate an understanding of general anatomy and physiology and apply wellness and disease concepts.
05.0 Demonstrate the importance of health, safety, and environmental management systems in dental organizations and their importance to organizational performance and regulatory compliance.
06.0 Recognize and respond to emergency situations.
07.0 Use information technology tools.
08.0 Explain the importance of employability skills.
09.0 Demonstrate knowledge of airborne and blood borne diseases.
10.0 Demonstrate leadership and teamwork skills needed to accomplish team goals and objectives.
11.0 Use dental terminology.
12.0 Identify structures and explain functions and pathologies of dental and general head and neck anatomy.
13.0 Identify principles of microbiology, disease transmission, and disease prevention, and perform infection control procedures.
14.0 Identify, describe, maintain, and utilize dental instruments and equipment.
15.0 Record patient assessment and treatment data.
16.0 Identify the functions of pharmacology and anesthesia as they relate to dentistry.
17.0 Identify and perform dental radiographic procedures using current technology.
18.0 Identify properties and uses, and manipulate dental materials.
19.0 Perform chairside assisting for general dentistry and specialty procedures.
20.0 Describe principles and perform techniques of preventive dentistry.
21.0 Perform general dental business office procedures.
22.0 Demonstrate professionalism as a dental team member in the clinical setting.

Specialty Options 1-3

23.0 Demonstrate skills for educational methodologies and strategies.
24.0 Demonstrate skills necessary for marketing, sales, and educational programs for dental products.
25.0 Demonstrate knowledge of dental practice set up and management procedures.

Florida Department of Education
Student Performance Standards

Program Title: **Dental Assisting Technology and Management**
CIP Number: **1351060104**
Program Length: **70 credit hours**

At the completion of this program, the student will be able to:	
01.0	Demonstrate knowledge of the dental health care delivery system and dental health occupations. The student will be able to:
01.01	Identify the basic components of the dental health care delivery system, including public, private, government, and non-profit.
01.02	Describe the various types of dental health care providers and the range of services available.
01.03	Describe the composition and functions of a dental health care team.
01.04	Identify the general roles and responsibilities of the individual members of the dental health care team.
01.05	Identify the roles and responsibilities of the consumer within the dental healthcare system.
01.06	Explain the causes and effects of factors that influence the current delivery system of dental healthcare.
01.07	Discuss the impact of emerging issues, including technology, epidemiology, bioethics, and socioeconomics, on the dental healthcare delivery system.
01.08	Discuss the history of dentistry and the dental health care team.
01.09	Demonstrate knowledge in communicating and collaborating with other members of the health care team to support comprehensive patient care.
02.0	Use oral, written, and electronic communication skills with professional etiquette in creating, expressing, and interpreting information and ideas. The student will be able to:
02.01	Apply basic speaking and active listening skills, including reflection, restatement, and clarification techniques.
02.02	Develop basic observational skills and related documentation strategies in written and oral form.
02.03	Identify characteristics of communication, including communication styles and barriers.
02.04	Compose written communication using correct spelling, grammar, etiquette, formatting, confidentiality, and specific formats of letter writing.
02.05	Recognize components of medical and dental terminology, abbreviations, and their uses.
02.06	Recognize the importance of courtesy and respect for patients and other health care workers and maintain good interpersonal relationships.

02.07	Recognize the importance of patient education regarding dental and health care.
02.08	Adapt communication skills to varied levels of understanding and orientation of diversity, but not limited to sexual orientation, gender orientation, disability, age, culture, economics, or ethnicity.
02.09	Identify psychological considerations influencing communication and behaviors.
03.0	Describe the legal and ethical responsibilities of the dental health care worker. The student will be able to:
03.01	Identify areas of 466, F.S. and Rule 64B5-16, F.A.C. and Rule 64B5-25, F.A.C. applicable to practice by the dental health workers and providers.
03.02	Explain practices that could result in malpractice, liability, negligence, abandonment, false imprisonment, and fraud.
03.03	Demonstrate procedures for accurate documentation and record keeping.
03.04	Interpret healthcare facility policy and procedures.
03.05	Explain the patients' "Bill of Rights”.
03.06	Identify and implement standards of the Health Insurance Portability and Accountability Act (HIPAA) and apply these standards to social media and the use of personal electronic devices in the workplace.
03.07	Distinguish between expressed, implied, and informed consent.
03.08	Explain the laws governing harassment, labor, and employment.
03.09	Differentiate between legal and ethical issues in dentistry.
03.10	Describe the dental profession’s Code of Ethics with emphasis on the dental assisting profession.
03.11	Identify and compare personal, professional, and organizational ethics.
03.12	Recognize the limits of authority and responsibility of dental health care workers, including legislated scope of practice.
03.13	Recognize and report illegal and/or unethical practices of dental health care workers.
03.14	Recognize various forms of abuse (i.e., trafficking, domestic violence, and neglect).
03.15	Demonstrate an understanding of reporting requirements for all types of abuse.
03.16	Identify resources for victims of abuse.
03.17	Explain risk management and root cause analysis.
03.18	Define commonly used legal vocabulary relating to dentistry.

	03.19 Describe ethical considerations/obligations in the dental team-patient relationship.
	03.20 Apply self-assessment skills to prepare for lifelong learning.
	03.21 Apply ethical principles, legal, and regulatory concepts to resolve ethical dilemmas.
04.0	Demonstrate an understanding of general anatomy and physiology and apply wellness and disease concepts. The student will be able to:
	04.01 Develop a basic understanding of the structure and function of the body systems.
	04.02 Identify common disorders related to each of the body systems.
	04.03 Identify and develop a control plan to address the issues of positive self-image, wellness, and stress.
05.0	Demonstrate the importance of health, safety, and environmental management systems in dental organizations and their importance to organizational performance and regulatory compliance. The student will be able to:
	05.01 Describe personal and jobsite safety rules and regulations that maintain safe and healthy work environments.
	05.02 Identify and describe methods in medical error reduction and prevention in the dental healthcare setting.
	05.03 Demonstrate an understanding of personal safety procedures based on the Occupational Safety and Health Administration (OSHA) and Centers for Disease Control (CDC) regulations (including standard precautions).
	05.04 Recognize Safety Data Sheets (SDS) and Globally Harmonized System (GHS) labels and comply with safety signs, symbols, and labels.
	05.05 Demonstrate procedures for the safe transport and transfer of patients.
	05.06 Describe workplace preparedness and procedures for fire safety, disaster, and evacuation.
	05.07 Explain emergency procedures to follow for responding to, reporting, and recording workplace accidents and acts of violence.
	05.08 Demonstrate handwashing and the use of personal protective equipment used in dentistry.
06.0	Recognize and respond to emergency situations. The student will be able to:
	06.01 Take and record vital signs.
	06.02 Describe legal parameters relating to the administration of emergency care.
	06.03 Obtain and maintain certification in basic life support (BLS), cardiopulmonary resuscitation (CPR), automated external defibrillator (AED), foreign body airway obstruction (FBAO), and first aid.
07.0	Use information technology tools. The student will be able to:
	07.01 Define terms and demonstrate basic computer skills.

	07.02 Interpret information from electronic medical documents.
08.0	Explain the importance of employability skills. The student will be able to:
	08.01 Identify personal traits or attitudes desirable in a member of the healthcare team.
	08.02 Exemplify basic professional standards of dental healthcare workers/providers as they apply to hygiene, dress, language, confidentiality, and behavior (i.e., telephone etiquette, courtesy, and self-introductions).
	08.03 Examine levels of education and industry credentialing requirements, including licensure and certification, employment opportunities, workplace environments, and career growth potential.
09.0	Demonstrate knowledge of airborne and blood-borne diseases. The student will be able to:
	09.01 Recognize emerging diseases and disorders.
	09.02 Demonstrate knowledge of the transmission and treatment of infectious diseases caused by airborne and blood-borne pathogens, infectious agents, and organisms.
	09.03 Identify "at-risk" behaviors that promote the spread of diseases caused by airborne and blood-borne pathogens and the public education necessary to combat the spread of these diseases.
	09.04 Identify community resources and services available to individuals with diseases caused by airborne and blood-borne pathogens.
	09.05 Apply infection control techniques designed to prevent the spread of diseases caused by airborne and blood-borne pathogens to the care of all patients following the Centers for Disease Control and Prevention (CDC) guidelines.
	09.06 Demonstrate knowledge of the legal aspects of patient privacy, standard precautions, and incident reporting protocols.
	09.07 Demonstrate knowledge of the legal aspects of treating patients with infectious diseases, including testing and proper documentation.
10.0	Demonstrate leadership and teamwork skills needed to accomplish team goals and objectives. The students will be able to:
	10.01 Analyze attributes and attitudes of an effective leader to include emotional intelligence.
	10.02 Recognize factors and situations that may lead to conflict.
	10.03 Demonstrate effective problem-solving techniques for managing team conflict.
11.0	Use dental terminology. The student will be able to:
	11.01 Identify and define common dental terms.
	11.02 Demonstrate the use of proper dental terminology in the dental environment.
12.0	Identify structures and explain functions and pathologies of dental and general head and neck anatomy. The student will be able to:
	12.01 Identify structures and functions of the head and neck anatomy, including bones, muscles, sinuses, salivary glands, lymph nodes, nerves, and blood vessels.

	12.02 Identify embryonic development of the head, oral cavity, and teeth.
	12.03 Identify teeth and their landmarks, and the morphological characteristics of each individual tooth.
	12.04 Describe the histological components of the head, oral cavity, and elements of the teeth and supporting structures.
	12.05 Recognize and describe oral pathological conditions related to the teeth and their supporting structures.
	12.06 Recognize and describe developmental anomalies related to the teeth, face, and oral structures.
	12.07 Describe and differentiate between occlusion and malocclusion.
	12.08 Discuss the adverse effects of the use of alcohol, tobacco, and both legal and illegal drugs on the oral cavity.
13.0	Identify principles of microbiology, disease transmission, and disease prevention, and perform infection control procedures. The student will be able to:
	13.01 Differentiate between pathogenic and non-pathogenic microorganisms.
	13.02 Describe pathogens and modes of disease transmission.
	13.03 Differentiate between aseptic and non-aseptic environments.
	13.04 Perform aseptic handwashing technique.
	13.05 Describe, apply, and differentiate between methods of pre-cleaning, disinfection, and sterilization of the dental environment.
	13.06 Identify chemicals and their uses for controlling the spread of disease in the dental environment.
	13.07 Identify and practice the current CDC guidelines for infection control in dental healthcare settings.
	13.08 Describe the duties of the dental office safety coordinator.
	13.09 Demonstrate compliance with the OSHA Blood-Borne Pathogens Standard (29CFR-1910.1030) applicable to the dental office environment.
	13.10 Identify and manage hazardous chemicals and biomedical wastes in accordance with the OSHA Hazard Communications Standard (29CFR-1910.1200), 64E-16 F.A.C., and Environmental Protection Agency regulations.
	13.11 Define principles of infection control, including standard and transmission-based precautions.
	13.12 Demonstrate knowledge of dental asepsis within the dental environment.
	13.13 Implement appropriate hand hygiene procedures and use of personal protective equipment.
	13.14 Demonstrate knowledge of surgical asepsis and isolation.

14.0	Identify, describe, maintain, and utilize dental instruments and equipment. The student will be able to:
14.01	Identify various types, functions, and operations of dental operatory and laboratory equipment.
14.02	Identify types and functions of operative, restorative, surgical, prosthodontic, periodontic, orthodontic, and endodontic dental instruments.
14.03	Maintain dental operatory equipment and instruments.
14.04	Identify types and functions of specific dental hygiene instruments with emphasis on category rather than individual instruments.
14.05	Seat and dismiss patients.
14.06	Operate oral evacuation devices and air/water syringe.
14.07	Maintain a clear field of vision, including isolation techniques.
14.08	Perform a variety of instrument transfers to include four-handed dentistry.
14.09	Utilize appropriate chairside assistant ergonomics.
14.10	Assist with and place dental dams as permitted by Florida Statute and Florida Board of Dentistry Rules.
15.0	Record patient assessment and treatment data. The student will be able to:
15.01	Take and record medical, health, and dental histories.
15.02	Record assessment of existing oral conditions.
15.03	Perform intraoral and extraoral photography.
15.04	Record conditions diagnosed by the dentist.
15.05	Record treatment-related data on the patient’s clinical record.
15.06	Record treatment plan and treatment in the patient’s chart.
15.07	Perform a visual assessment of existing oral conditions.
15.08	Distinguish between and report subjective, objective, indications, and contraindication information.
15.09	Report relevant information in order of occurrence.
16.0	Identify the functions of pharmacology and anesthesia as they relate to dentistry. The student will be able to:
16.01	Identify drug requirements, agencies, and regulations, including prescribing regulations related to medications subject to addiction.

16.02	Distinguish among the five schedules of controlled substances.
16.03	Record a drug/medication prescription in a patient's chart.
16.04	Understand ratios and proportional problems to calculate prescribed drug dosages as instructed by the dentist.
16.05	Identify drug/medicaments actions, metabolism, side effects, indications, and contraindications; verify with Physician's Desk Reference (PDR) or its equivalent.
16.06	Identify pharmaceuticals and medicaments used in dentistry.
16.07	Identify the tissues innervated by each of the nerves associated with dental local and topical anesthetics to prepare and apply a topical anesthetic agent.
16.08	Identify properties of anesthetics.
16.09	Prepare syringes for the administration of local anesthetics.
16.10	Monitor and identify precautions in the use of nitrous oxide-oxygen conscious sedation.
16.11	Understand the calculations of nitrous oxide-oxygen delivered by the dentist during a conscious sedation procedure.
16.12	Identify drugs and agents used for treating dental-related infection.
16.13	Identify and respond to dental office emergencies.
16.14	Describe the signs and symptoms of drug addiction.
16.15	Recognize specific conditions in the oral cavity that may be caused by pharmaceutical agents.
16.16	Discuss the dental team's responsibility to recognize patients with drug addictions.
17.0	Identify and perform dental radiographic procedures using current technology. The student will be able to:
17.01	Describe the history, physics, and biological effects of ionizing radiation.
17.02	Identify parts of the radiography machine, including accessories.
17.03	Demonstrate radiologic health protection techniques.
17.04	Place and expose dental radiographic images on digital image receptors.
17.05	Perform extraoral radiography as required for dental diagnostic procedures.
17.06	Describe and identify radiographic anatomical landmarks and pathologies.

	17.07 Mount radiographic images.
	17.08 Describe how to maintain digital image receptors and/or image devices.
	17.09 Maintain digitally acquired radiographic images.
	17.10 Practice infection control procedures for all radiographic procedures.
18.0	Identify properties and uses, and manipulate dental materials. The student will be able to:
	18.01 Identify properties and uses and manipulate gypsum.
	18.02 Identify properties and uses and manipulate restorative materials.
	18.03 Identify properties and uses and manipulate dental cements.
	18.04 Place and remove matrices as permitted by Florida Statute and Florida Board of Dentistry Rule.
	18.05 Place and remove temporary restorations as permitted by Florida Statute and Florida Board of Dentistry Rule.
	18.06 Identify properties and uses and manipulate impression materials.
	18.07 Make intraoral impressions as permitted by Florida Statute and Florida Board of Dentistry Rule.
	18.08 Identify properties and uses and manipulate acrylics and thermoplastic materials.
	18.09 Identify properties and uses and manipulate waxes.
	18.10 Perform dental laboratory procedures to include the fabrication of casts, custom trays, whitening trays, temporary crowns, and bridges.
	18.11 Identify and manage hazardous dental materials and wastes in accordance with the OSHA Hazard Communications Standard (29CFR-1910.1200) and Environmental Protection Agency regulations.
	18.12 Employ measurements of time, temperature, distance, capacity, and mass/weight during the manipulation of dental materials.
19.0	Perform chairside assisting for general dentistry and specialty procedures. The student will be able to:
	19.01 Describe procedures, equipment, materials, and instrumentation used in the dental specialties to include but not limited to periodontics, endodontics, pedodontics, oral and maxillofacial specialties, orthodontics, prosthodontics, dental radiology, pathology, oral implantology, dental anesthesia, dentofacial orthopedics, and oral medicine.
	19.02 Assemble tray set-ups for general and specialty dental procedures.
	19.03 Assist in general and specialty dental procedures.
	19.04 Describe the special needs of patients during dental procedures.

19.05	Perform patient education to include pre- and post-operative instructions as prescribed by a dentist.
19.06	Describe procedures, equipment, and materials utilized in digital dentistry to include CAD/CAM and intraoral scanning technology.
19.07	Identify, describe, and demonstrate the uses and principles of phlebotomy as they pertain to dentistry.
19.08	Identify, describe, and demonstrate the properties, uses, and principles of autologous blood concentrates as they pertain to dentistry.
20.0	Describe principles and perform techniques of preventive dentistry. The student will be able to:
20.01	Describe the process of oral biofilm formation and its management through preventative dentistry.
20.02	Provide patient preventive education and oral hygiene instruction.
20.03	Identify, communicate, and instruct patients on applicable methods of preventative dentistry that utilize: • Risk assessment • Evidence-based learning • Individualized preventive care plans • Motivational interviewing/counseling
20.04	Training regarding health status and rationale for a preventive care plan.
20.05	Prepare and set up for various preventative procedures.
20.06	Identify properties and uses of abrasive agents used to polish coronal surfaces and appliances.
20.07	Perform coronal polish and apply anticariogenic and desensitizing treatments as permitted by Florida Statute and Florida Board of Dentistry Rule.
20.08	Clean and polish removable dental appliances.
20.09	Apply dental sealants as permitted by Florida Statute and Florida Board of Dentistry Rule.
20.10	Identify the elements of nutrition, basic food groups, and acceptable diets as recommended by the U.S. Department of Agriculture.
20.11	Identify dietary deficiencies and dietary practices that contribute to the manifestation of symptoms in the oral cavity.
20.12	Describe the metabolism of nutrient foods, vitamins, and minerals by the human body and pathological conditions related to nutrient deficiencies.
20.13	Identify community dental resources and services available.
20.14	Understand the dynamics of preventive dentistry in the dental public health setting.
21.0	Perform general dental business office procedures. The student will be able to:

21.01	Maintain appointment control.
21.02	Assess, create, modify, and maintain an active re-care system.
21.03	Prepare and maintain accurate patient records.
21.04	Prepare and maintain patient financial records and collect fees.
21.05	Demonstrate the use of dental procedure codes and current terminology when preparing and managing insurance claims.
21.06	Differentiate the different categories of dental procedure codes.
21.07	Prepare and maintain dental office inventory control and purchasing.
21.08	Demonstrate public relations responsibilities of the secretary/receptionist.
21.09	Demonstrate skills on office equipment to include computers and dental office management practice software.
21.10	Maintain the dental business office environment.
21.11	Receive and dismiss patients and visitors.
21.12	Demonstrate appropriate patient management/customer service skills.
21.13	Demonstrate and maintain office financial records and budgets.
21.14	Describe the effect of money management on practice goals.
22.0	Demonstrate professionalism as a dental team member in the clinical setting. The student will be able to:
22.01	Perform dental assisting duties, dental assisting expanded functions, and dental radiographic procedures in a clinical setting under the direct supervision of a licensed dentist.
22.02	Interact with a professional dental team in the delivery of patient services.
22.03	Utilize employability skills.
22.04	Develop and maintain a professional portfolio to document knowledge, continued education, skills, and experience.
22.05	Write an appropriate resume.
22.06	Conduct a job search and complete a job application correctly.
22.07	Demonstrate effective job interview techniques.
22.08	Examine levels of education and credentialing requirements, including licensure and certification, employment opportunities,

	workplace environments, and career growth potential.
Specialty Option 1: Education	
23.0	Demonstrate skills for educational methodologies and strategies. The student will be able to:
23.01	Develop and implement policies and operational procedures that meet the American Dental Association accreditation standards for Allied Dental Programs.
23.02	Identify and describe educational theory and methodology as they relate to Allied Dental Education.
23.03	Establish liaison with appropriate accrediting organizations, community partners, and educational institutions.
Specialty Option 2: Product Marketing, Sales, and Educational Programs	
24.0	Demonstrate skills necessary for marketing, sales, and educational programs for dental products. The student will be able to:
24.01	Establish educational programs relating the value and effectiveness of various dental products.
24.02	Apply economic principles for product marketing, distribution, and sales.
24.03	Demonstrate effective product evaluation and comparison.
24.04	Identify appropriate consumer populations.
Specialty Option 3: Dental Practice Management	
25.0	Demonstrate knowledge of dental practice set up and management procedures. The student will be able to:
25.01	Establish policies and procedures for dental practice operations.
25.02	Implement policies and procedures for establishing effective management of a dental practice.

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as experimental, quality, and safety procedures are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate, and troubleshoot equipment/tools used to make observations. Students understand measurement error; and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

Field Internship Activities: Clinical experiences are integrated with the didactic portion of this program. Clinical experience assisting a dentist must be an integral part of the educational program designed to perfect students' competence in performing dental assisting functions, rather than to provide basic instruction. The major portion of the students' time in clinical assignments must be spent assisting with or participating in patient care. Prior to clinical assignments, students demonstrate minimum competence in performing the procedures which they will be expected to perform in their clinical experience.

Special Notes

Dental assisting programs accredited by the American Dental Association Commission on Dental Accreditation are required to implement enrollment and admissions criteria that include the selection of adult students with a high school diploma, its equivalent, or an advanced degree.

This program focuses on broad, transferable skills and stresses understanding and demonstration of the following elements of the health care industry; planning, management, finance, technical and production skills, underlying principles of technology, labor issues, community issues and health, safety, and environmental issues.

This program meets the goals of TECH PREP and is based on the model developed by the Allied Health Articulation Task Force.

This program should meet the most current edition of the American Dental Association Accreditation Standards for Dental Assisting Education Programs. For further information, contact: Commission on Dental Accreditation, 211 East Chicago Avenue, Chicago, Illinois 60611.

For Florida information contact the Florida Agency for Health Care Administration (AHCA), Division of Health Quality Assurance, Board of Dentistry, 4052 Bald Cypress Way, Tallahassee, FL 32399, 850/245-4161.

This program meets the Department of Health's education requirements for HIV/AIDS, Domestic Violence and Prevention of Medical Errors. Although not a requirement for initial licensure, it is a requirement for renewal, therefore the instructor **may** provide a certificate for renewal purposes to the student verifying these requirements have been met.

If students in this program are seeking a licensure, certificate, or registration through the Department of Health, please refer to 456.0635, F.S. for more information on disqualification for a license, certificate, or registration through the Department of Health.

Pursuant to 466.024, F.S., 64B5-16.002, F.A.C. and 64B5-9.011, F.A.C., completers of the dental assisting program may be awarded a certificate verifying formal training which is required for the performance of certain remediable tasks (also known as expanded functions).

Students should be encouraged to become members and participate in the activities of the professional organization: The American Dental Assistants Association.

Completers of the dental assisting program should be encouraged to take the Dental Assisting National Board (DANB) Certified Dental Assistant (CDA) exam. DANB is recognized by the American Dental Association as the national certification board for dental assistants.

General Education Course Requirements for AS and AAS Degrees

State Board of Education Rule 6A-14.030(4), F.A.C., identifies 15 credit hours as the minimum amount of general education coursework required in the Associate of Science (AS) degree and the Associate of Applied Science (AAS) degree. In addition, Rule 6A-14.0303, F.A.C., implements s. 1007.25, F.S., and requires students entering a technical education degree program in the 2022-2023 academic year, and thereafter, to complete at least one identified core course in each subject area as part of the general education course requirements (15 credit hours total) before a degree is awarded) The core subject areas include:

- Communication.
- Humanities.
- Mathematics.
- Natural Sciences.
- Social Sciences.

Career and Technical Student Organization (CTSO)

CTSOs are co-curricular career and technical student organizations providing leadership training and reinforcing specific career and technical skills. Career and Technical Student Organizations provide activities for students as an integral part of the instruction offered. Other CTSOs not listed in this curriculum framework or recognized by the Florida Department of Education are permissible provided they support student mastery over the standards and benchmarks of this curriculum framework.

Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

Florida Department of Education
Curriculum Framework

The standards and benchmarks for this program were updated for the 2026-27 academic year.

Program Title: **Dental Hygiene**
Career Cluster: **Health Science**

Associate in Science	
CIP Number	1351060200
Program Type	College Credit
Program Length	88 credit hours
CTSO	HOSA
SOC Codes (all applicable)	For program SOC codes, please see the Program and Course Tables section of the CTE Program Resources page linked below.
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml

Purpose

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Health Science career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of Health Science career cluster.

This program is designed to prepare students for employment as dental hygienists or to provide supplemental training for persons previously or currently employed in this occupation.

The content includes but is not limited to patient assessment, dental hygiene instrumentation and direct patient care services (scaling/root planing/curettage/radiographs/oral hygiene-instruction/expanded functions), community dental health, dental office emergencies, infection control, special needs dental care, office management, employability skills, ethics and jurisprudence.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Program Structure

This program is a planned sequence of instruction consisting of 88 credit hours.

When developing the course sequence for the local implementation of this program, select courses that:

- Meet the skill development requirements of the standards and benchmarks of this program.
- Meet the general education core course requirements of Rule 6A-14.0303, Florida Administrative Code.
- Where reasonable and practicable, align with programs offered by your institution or other postsecondary institutions in Florida, including:
    - Related CCC and ATD credentials.
    - Baccalaureate degrees within the same career pathway and/or Federal CIP code.

Visit FloridaShines' Discover Programs website to identify other institutions that offer similar programs to review their course sequencing. Where appropriate, course alignment between institutions offering related programs can facilitate interagency student articulation.

Visit FloridaShines' Common Prerequisites Manual to identify courses that are prerequisites for admission into an upper division program. When sub-baccalaureate courses are aligned to the course admissions requirements of baccalaureate programs with the same career pathway, students can enter upper division coursework seamlessly.

Regulated Programs

Students are prepared to take the Dental Hygiene National Board and state licensure examinations. Dental Hygiene Programs accredited by the American Dental Association Commission on Dental Accreditation are required to implement clinical experiences outlined in these program standards.

Florida's Career Readiness Skills for CTE Programs

Employability Skills	
01.0	Apply academic skills to workplace scenarios.
01.01	Use reading skills.
01.02	Use writing skills.
01.03	Use mathematical strategies and procedures.
01.04	Use scientific principles and procedures.
02.0	Design a solution to an industry problem.
02.01	Use critical thinking.
02.02	Use creativity.
02.03	Make sound decisions.
02.04	Solve problems.
02.05	Reason.
02.06	Plan and organize.
03.0	Manage resources within an industry project
03.01	Manage time.
03.02	Manage money or resources.
03.03	Manage materials.
03.04	Manage personnel.
04.0	Oversee the subcomponents, operations and output of a technical or organizational system.
04.01	Manage systems.
04.02	Monitor systems.
04.03	Improve systems.
05.0	Use information for decision making.
05.01	Locate information.
05.02	Organize information.
05.03	Use information.

	05.04 Analyze information.
	05.05 Communicate information.
06.0	Apply relevant technology to workplace scenarios to aid productivity.
	06.01 Use technology.
07.0	Interpret and express interpersonal communication.
	07.01 Communicate verbally.
	07.02 Listen actively.
	07.03 Comprehend written material.
	07.04 Convey information in writing.
	07.05 Communicate nonverbally.
	07.06 Interpret nonverbal communication.
08.0	Interact with others to accomplish workplace goals.
	08.01 Collaborate with others in a team.
	08.02 Respond to customer needs.
	08.03 Exercise leadership.
	08.04 Negotiate to resolve conflict.
	08.05 Respect others.
09.0	Manage personal behavior to maximize productivity and professional growth.
	09.01 Demonstrate responsibility and self-discipline.
	09.02 Adapt and show flexibility.
	09.03 Work independently.
	09.04 Demonstrate a willingness to learn.
	09.05 Demonstrate integrity.
	09.06 Demonstrate professionalism.
	09.07 Take initiative.
	09.08 Display positive attitude.
	09.09 Take responsibility for professional growth.

Job Attainment	
10.0	Find, assess and apply to job opportunities.
10.01	Identify online job posts relevant to his or her career aspirations.
10.02	Compare and contrast the job posts' required qualifications, job duties, compensation, benefits and employers.
10.03	Define what information, documentation and writing prompts are required for the positions.
11.0	Communicate personal competence, character and fit for a job opportunity.
11.01	Develop a resume.
11.02	Write a cover letter.
11.03	Curate a professional portfolio that includes work products.
11.04	Prepare for and experience a mock job interview.
12.0	Cultivate and leverage relationships to professionally advance.
12.01	Request a signed reference letter, letter of recommendation and/or an online skill/professionalism endorsement.
12.02	Develop a plan to cultivate a professional digital footprint.
12.03	Develop a networking plan for a specific industry of interest.

Standards

After successfully completing this program, the student will be able to perform the following:

01.0 Demonstrate knowledge of the dental health care delivery system and dental health occupations.
02.0 Use oral and written communication skills in creating, expressing, and interpreting information and ideas.
03.0 Describe the legal and ethical responsibilities of the dental health care provider.
04.0 Demonstrate an understanding of general anatomy and physiology and apply wellness and disease concepts.
05.0 Demonstrate the importance of health, safety, and environmental management systems in dental organizations and their importance to organizational performance and regulatory compliance.
06.0 Recognize and respond to emergency situations.
07.0 Use information technology tools.
08.0 Explain the importance of employability skills.
09.0 Demonstrate knowledge of infectious diseases.
10.0 Demonstrate leadership and teamwork skills needed to accomplish team goals and objectives.
11.0 Perform remediable tasks delegable to a dental hygienist as permitted by Florida Statutes/Law.
12.0 Perform dental office procedures.
13.0 Identify, describe, maintain, and utilize dental instruments and equipment.
14.0 Identify and perform dental and radiographic procedures.
15.0 Identify the properties and uses of dental materials, demonstrate their manipulation, and integrate digital technologies such as image scanners and software for designing and fabricating dental appliances, crowns, and restorations.
16.0 Identify and explain the formation and function of the head, neck, dental structures, and tissues, including pathological conditions of the human body in relation to the oral cavity.
17.0 Identify and explain principles of microbiology, disease transmission, disease prevention, and perform infection control procedures.
18.0 Explain usage, administration, indications, contraindications, adverse reactions, and precautions of pharmaceutical and anesthetic agents used in the treatment of dental disease.
19.0 Describe principles and perform techniques of preventive dentistry.
20.0 Perform patient assessment.
21.0 Perform direct patient services and competently provide the dental hygiene process of care for the child, adolescent, adult, and geriatric patient, as well as the special needs patient.
22.0 Implement and evaluate community health interventions and research activities.

Florida Department of Education
Student Performance Standards

Program Title: **Dental Hygiene**
CIP Number: **1351060200**
Program Length: **88 credit hours**

At the completion of this program, the student will be able to:	
01.0	Demonstrate knowledge of the dental health care delivery system and dental health occupations. The student will be able to:
01.01	Identify the basic components of the dental health care delivery system, including public, private, government, and non-profit.
01.02	Describe the roles of general and specialty dental healthcare providers, including the services offered by specialists such as orthodontists, periodontists, and oral surgeons.
01.03	Describe the composition and functions of a dental health care team.
01.04	Identify the general roles and responsibilities of the individual members of the dental health care team.
01.05	Identify the roles and responsibilities of the consumer within the dental healthcare system.
01.06	Explain factors that influence the current delivery system of dental healthcare.
01.07	Explain the impact of current and emerging issues, including, Artificial Intelligence (AI), teledentistry, technology, epidemiology, bioethics, and socioeconomics on the dental healthcare delivery system.
01.08	Discuss the history of dentistry and dental hygiene.
01.09	Demonstrate knowledge in communicating and collaborating with other members of the health care team to support comprehensive patient care.
02.0	Use oral and written communication skills in creating, expressing, and interpreting information and ideas. The student will be able to:
02.01	Apply basic speaking and active listening skills, including reflection, restatement, and clarification techniques.
02.02	Develop basic observational skills and related documentation strategies in written and oral form.
02.03	Identify characteristics of successful and unsuccessful communication, including communication styles and barriers.
02.04	Compose written communication using correct spelling, grammar, formatting, and confidentiality.
02.05	Recognize components of medical and dental terminology and abbreviations.
02.06	Recognize the importance of courtesy and respect for patients and other health care workers and maintain good interpersonal relationships.

02.07	Develop and implement effective patient education strategies, including written, oral, and digital communication methods.
02.08	Adapt communication skills to meet various levels of understanding and orientation of diversity, including but not limited to sexual orientation, gender orientation, disability, age, culture, economics, ethnicity, and religion.
02.09	Identify psychological considerations influencing communication and behaviors.
03.0	Describe the legal and ethical responsibilities of the dental health care provider. The student will be able to:
03.01	Identify areas of 466, F.S., Rule 64B5-16, F.A.C., and Rule 64B5-25, F.A.C., applicable to practice by dental health providers.
03.02	Explain practices that could result in malpractice, liability, negligence, abandonment, false imprisonment, and fraud.
03.03	Demonstrate procedures for accurate documentation and record keeping.
03.04	Interpret healthcare facility policy and procedures.
03.05	Explain the patients' "Bill of Rights”.
03.06	Identify and implement standards of the Health Insurance Portability and Accountability Act (HIPAA), including but not limited to social media and use of personal electronic devices in the workplace.
03.07	Distinguish between express, implied, and informed consent.
03.08	Explain the laws governing harassment, labor, and employment.
03.09	Differentiate between legal and ethical issues in dentistry.
03.10	Describe the dental hygienist profession’s Code of Ethics.
03.11	Identify and compare personal, professional, and organizational ethics.
03.12	Recognize the limits of authority and responsibility of dental health care workers, including legislated scope of practice.
03.13	Recognize and report illegal and/or unethical practices of dental health care workers.
03.14	Recognize and report child, elder, and domestic abuse as mandated by law.
03.15	Demonstrate an understanding of reporting requirements for all types of abuse.
03.16	Identify resources for victims of abuse.
03.17	Define commonly used legal vocabulary relating to dentistry.
03.18	Describe ethical considerations/obligations in the dental team-patient relationship.

	03.19 Explain risk management and root cause analysis in the prevention of medical errors, infection control breaches, improper documentation, and failure to obtain informed consent.
	03.20 Apply self-assessment skills to prepare for lifelong learning.
	03.21 Apply ethical, legal, and regulatory principles to resolve ethical dilemmas.
04.0	Demonstrate an understanding of general anatomy and physiology and apply wellness and disease concepts. The student will be able to:
	04.01 Develop a basic understanding of the structure and function of the body systems.
	04.02 Identify common disorders associated with each body system, emphasizing the oral manifestations of disease and the necessary modifications to treatment.
	04.03 Explain basic concepts of positive self-image, wellness, and stress.
	04.04 Describe a wellness and stress control plan that can be used in personal and professional life.
05.0	Demonstrate the importance of health, safety, and environmental management systems in dental organizations and their importance to organizational performance and regulatory compliance. The student will be able to:
	05.01 Describe personal and jobsite safety rules and regulations that maintain safe and healthy work environments, including the proper transport and transfer of patients.
	05.02 Utilize root cause analysis, electronic health record audits, and checklists for medical/dental error prevention.
	05.03 Demonstrate an understanding of personal safety procedures based on Occupational Safety and Health Administration (OSHA) and Centers for Disease Control and Prevention (CDC) regulations (including standard precautions).
	05.04 Recognize Safety Data Sheets (SDS) and Globally Harmonized System (GHS) labels and comply with safety signs, symbols, and labels.
	05.05 Describe workplace preparedness and procedures for fire safety, disaster, and evacuation.
	05.06 Explain procedures to follow for responding to, reporting, and recording workplace incidents.
	05.07 Demonstrate handwashing and the use of personal protective equipment in dentistry.
06.0	Recognize and respond to emergency situations. The student will be able to:
	06.01 Take and record vital signs and know abnormal vital parameters (bp, blood glucose, respirations, etc.) and their implications for dental treatment.
	06.02 Describe legal parameters relating to the administration of emergency care.
	06.03 Obtain and maintain certification in cardiopulmonary resuscitation (CPR), automated external defibrillator (AED), foreign body airway obstruction (FBAO), and first aid.
07.0	Use information technology tools. The student will be able to:

	07.01 Define terms and demonstrate basic computer skills.
	07.02 Interpret and input information from electronic medical documents.
	07.03 Demonstrate an understanding of Artificial Intelligence (AI) software and its applications in digital dentistry.
08.0	Explain the importance of employability skills. The student will be able to:
	08.01 Identify personal traits or attitudes desirable in a member of the healthcare team.
	08.02 Exemplify basic professional standards of dental healthcare providers.
	08.03 Develop a professional resume and/or career portfolio.
	08.04 Conduct a job search and complete a job application form.
	08.05 Demonstrate effective job interview techniques.
	08.06 Examine levels of education, credentialing requirements (including licensure and certification), employment opportunities, workplace environments, and career growth potential.
09.0	Demonstrate knowledge of infectious diseases. The student will be able to:
	09.01 Recognize oral manifestations of systemic diseases and infections that may contraindicate dental treatment.
	09.02 Recognize emerging diseases and disorders.
	09.03 Demonstrate knowledge of transmission of infectious diseases, their causative agents, and the treatment of diseases caused by infectious organisms.
	09.04 Identify "at-risk" behaviors that promote the spread of infectious diseases and the public education necessary to combat the spread of these diseases.
	09.05 Identify community resources and services available to individuals with infectious diseases.
	09.06 Apply infection control techniques designed to prevent the spread of infectious diseases in the care of all patients following the Centers for Disease Control and Prevention (CDC) guidelines.
	09.07 Demonstrate knowledge of the legal aspects of treating patients with infectious diseases, including testing and proper documentation.
10.0	Demonstrate leadership and teamwork skills needed to accomplish team goals and objectives. The students will be able to:
	10.01 Analyze attributes of effective leadership.
	10.02 Recognize factors and situations that may lead to conflict.
	10.03 Demonstrate effective problem-solving techniques for managing team conflict.

11.0	Perform remediable tasks delegable to a dental hygienist as permitted by Florida Statutes/Law. The student will be able to:
	11.01 Demonstrate remediable delegable tasks to lab and/or clinical competence.
12.0	Perform dental office procedures. The student will be able to:
	12.01 Maintain appointment control with effective time management skills.
	12.02 Assess, create, modify, and maintain an active re-care system.
	12.03 Prepare and maintain accurate patient records and conduct chart audits.
	12.04 Demonstrate skills on office equipment to include computers and dental office management systems.
	12.05 Utilize correct dental codes and nomenclature for procedures.
13.0	Identify, describe, maintain, and utilize dental instruments and equipment. The student will be able to:
	13.01 Identify and demonstrate the operation of dental operatory and laboratory equipment.
	13.02 Maintain dental operatory equipment and instruments.
	13.03 Identify and demonstrate the use of dental hygiene instruments.
14.0	Identify and perform dental and radiographic procedures. The student will be able to:
	14.01 Describe the history, physics, and biological effects of ionizing radiation.
	14.02 Identify parts of the radiographic imaging machine.
	14.03 Demonstrate radiologic health protection techniques.
	14.04 Perform radiographic procedures that include processing, utilization, and care of equipment.
	14.05 Place image receptors, expose dental images, and understand the relevance of exposure settings, times, and patient record keeping.
	14.06 Identify radiographic anatomical landmarks.
	14.07 Mount radiographic surveys and/or save and store digital files.
	14.08 Recognize and correct errors in exposing radiographic images.
15.0	Identify the properties and uses of dental materials, demonstrate their manipulation, and integrate digital technologies such as image scanners and software for designing and fabricating dental appliances, crowns, and restorations. The student will be able to:

	15.01 Identify properties and uses, and demonstrate manipulation of gypsum.
	15.02 Identify properties and uses, and demonstrate manipulation of sealants and restorative materials.
	15.03 Identify properties and uses, and demonstrate manipulation of dental cements.
	15.04 Identify properties and uses, and demonstrate manipulation of impression materials.
	15.05 Identify properties and uses, and demonstrate manipulation of acrylics and/or thermoplastics.
	15.06 Identify and demonstrate dental laboratory procedures as outlined by remediable tasks delegable to the dental hygienist by Florida Statute/Law.
16.0	Identify and explain the formation and function of the head, neck, dental structures, and tissues, including pathological conditions of the human body in relation to the oral cavity. The student will be able to:
	16.01 Identify structures and functions of head and neck anatomy, including bones, muscles, sinuses, salivary glands, lymph nodes, nerves, and blood vessels.
	16.02 Identify embryonic development of the head, oral cavity, and teeth.
	16.03 Describe the histological components of the head, oral cavity, and elements of the teeth and supporting structures.
	16.04 Describe and differentiate between normal and malocclusion.
	16.05 Identify the elements of the chemical basis of life, cellular metabolism, and the structure of the major tissue types of the human body.
	16.06 Describe the metabolism of nutrient foods, vitamins, and minerals by the human body and pathological conditions related to nutrient deficiencies.
	16.07 Identify anatomical structures and physiological functions of the principal systems of the human body, including the skeletal, muscular, integumentary, circulatory, lymphatic, endocrine, digestive, reproductive, respiratory, urinary, and nervous systems.
	16.08 Identify and explain oral pathological conditions affecting the teeth and supporting structures, including general pathology, as many systemic conditions present oral manifestations.
	16.09 Identify teeth and their landmarks, and the morphological characteristics of each individual tooth.
	16.10 Recognize and describe developmental anomalies related to the head and oral structures.
17.0	Identify and explain principles of microbiology, disease transmission, disease prevention, and perform infection control procedures. The student will be able to:
	17.01 Differentiate between pathogenic and non-pathogenic microorganisms.
	17.02 Describe pathogens and modes of disease transmission.
	17.03 Differentiate between aseptic and non-aseptic environments.
	17.04 Perform aseptic handwashing technique.

	17.05 Describe, apply, and differentiate between methods of cleaning, disinfection, and sterilization of the dental environment.
	17.06 Recognize the need for and demonstrate the use of proper precautions for the prevention of disease transmission during all dental-related procedures.
	17.07 Identify the role of prokaryotic cells, eukaryotic cells, viruses, and bacteria in infections and the mechanisms of diseases.
	17.08 Identify the genetics of microbes, including replication of DNA and protein synthesis, mutation, and gene transfer.
18.0	Explain usage, administration, indications, contraindications, adverse reactions, and precautions of pharmaceutical and anesthetic agents used in the treatment of dental disease. The student will be able to:
	18.01 Identify the agencies responsible for drug regulations.
	18.02 Document in the patient's chart prescribed or over-the-counter medications, along with any supplements or vitamins the patient is taking.
	18.03 Identify medication actions, side effects, indications, and contraindications; verify with Physician's Desk Reference or its equivalent.
	18.04 Describe the process of medication metabolism.
	18.05 Identify pharmaceuticals and medicaments used in dentistry.
	18.06 Recognize specific conditions in the oral cavity that may be caused by pharmaceutical agents.
	18.07 Identify properties of anesthetics.
	18.08 Identify the tissues innervated by each of the nerves associated with dental local and topical anesthesia.
	18.09 Describe the properties and mode of action of an effective local and topical anesthetic.
	18.10 List systemic considerations in choosing a local and topical anesthetic.
	18.11 Describe ASA classifications and their role in dental treatment planning.
	18.12 Describe and demonstrate methods of administering topical and local anesthetics.
	18.13 List potential local and systemic adverse reactions associated with local anesthetic administration.
	18.14 Prepare armamentarium for administering local anesthetics for recognized techniques.
	18.15 Document anesthetics administered and any adverse reactions in a patient's chart.
	18.16 Describe the administration and monitoring process and identify precautions in the use of nitrous oxide-oxygen inhalation analgesia.
19.0	Describe principles and perform techniques of preventive dentistry. The student will be able to:

19.01	Identify, communicate, and instruct patients on applicable methods of preventive dentistry that utilize: • Risk assessment • Evidence-based learning • Individualized preventive care plans • Motivational interviewing/counseling • Training regarding health status and rationale for the preventive care plan
19.02	Identify properties and indications for use of anticarcinogenic treatments utilized in the community, home, and office.
19.03	Identify and demonstrate proper auxiliary aides based on individual patient needs.
19.04	Identify and describe deficiencies that manifest symptoms in the oral cavity and communicate applicable therapies.
19.05	Present dietary recommendations to address specific dental needs during nutritional counseling.
20.0	Perform patient assessment. The student will be able to:
20.01	Take, record, and correlate medical/dental history with dental hygiene treatment plan and services to be performed.
20.02	Understand contraindications to dental hygiene treatment for systemic conditions or diseases.
20.03	Take, record, and correlate vital sign observations with the dental hygiene treatment plan and services to be performed.
20.04	Assess vital signs in order to reduce the incidence of patient complications and medical emergencies.
20.05	Perform, record, and correlate extraoral and intraoral examination findings with the dental hygiene care plan and patient services to be performed.
20.06	Observe and record existing restorations as well as conditions and suspected pathologies of hard and soft tissues using the appropriate armamentarium.
20.07	Perform a comprehensive periodontal examination, which includes pocket depth, attachment level, recession, mobility, furcations, radiographic findings, and tissue health.
20.08	Consult with dentists and physicians to verify dental and medical information to develop and implement a dental hygiene care plan.
20.09	Interpret and correlate dental radiographs/intraoral images and dental charting with the dental hygiene treatment plan.
20.10	Perform soft tissue reassessment and evaluate the effects of initial dental hygiene therapy, and make appropriate therapy modifications or referrals.
20.11	Identify oral manifestations that deviate from normal.
20.12	Document the diagnosis made by the dentist and dental hygienist.
20.13	Recognize and respond appropriately to contraindications for dental hygiene treatment found in medical and dental history.

	20.14 Identify and assess dental office emergencies and follow the appropriate protocol for treatment.
21.0	Perform direct patient services and competently provide the dental hygiene process of care for the child, adolescent, adult, and geriatric patient, as well as the special needs patient. The student will be able to:
	21.01 Demonstrate all delegable dental hygiene clinical services within the scope of practice as permitted by Florida statute/law.
	21.02 Communicate to the patient appropriate post-operative instructions and correctly select all necessary self-care therapies intended to restore and maintain the patient's oral health.
	21.03 Provide and communicate recommendations for patient use of caries prevention agents.
	21.04 Provide a comprehensive collection of patient data to identify the physical and oral health status, as well as risk factors that could affect patient care and healing.
	21.05 Provide analysis of assessment findings and use of critical thinking in order to address the patient's dental hygiene treatment needs.
	21.06 Establish a dental hygiene care plan that reflects the desired outcomes and treatment interventions to facilitate optimal oral health.
	21.07 Present proposed treatment and procedures to the patient and obtain appropriate informed consent signatures prior to rendering patient care services.
	21.08 Provide patient-centered treatment and evidence-based care in a manner minimizing risk and optimizing oral and systemic health.
	21.09 Measure the extent to which desired outcomes identified in the dental hygiene care plan are achieved.
	21.10 Demonstrate the ability to collaborate effectively with an interprofessional healthcare team, using clear and respectful communication to contribute to comprehensive, patient-centered care.
22.0	Implement and evaluate community health interventions and research activities. The student will be able to:
	22.01 Demonstrate competence in assessment, planning, implementing, evaluating, and documenting community health interventions.
	22.02 Utilize dental indices to assess, interpret, and evaluate oral health status in individuals and populations, supporting community health initiatives and evidence-based decision making.
	22.03 Formulate and analyze research methodologies for community health interventions.
	22.04 Perform a literature search, critically evaluate scientific research, and identify credible, peer-reviewed sources for evidence-based practice.
	22.05 Apply research findings to dental hygiene care delivery.
	22.06 Apply statistical analysis and evidence-based research to health trends and community interventions.
	22.07 Collaborate and perform a needs assessment with community partners.
	22.08 Differentiate the scientific value of literature found in both electronic and traditional media.

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools, and equipment, as well as experimental, quality, and safety procedures, are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate, and troubleshoot equipment/tools used to make observations. Students understand measurement error and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

Equipment and supplies should be provided to enhance hands-on experiences for students. In-depth clinical information and requirements can be found in the Commission on Dental Accreditation Dental Hygiene Standards.

Special Notes

General education content must include oral and written communications, Psychology, and Sociology.

Biomedical science content must include content in anatomy, physiology, chemistry, biochemistry, microbiology, immunology, general pathology, and/or pathophysiology, nutrition, and pharmacology.

Dental sciences content must include tooth morphology, head, neck, and oral anatomy, oral embryology and histology, oral pathology, radiography, periodontology, pain management, and dental materials.

Graduates must be competent in providing the dental hygiene process of care, which includes: Assessment, Planning, Implementation, and Evaluation.

This program meets the Department of Health's education requirements for HIV/AIDS, Domestic Violence, and Prevention of Medical Errors. Although not a requirement for initial licensure, it is a requirement for renewal, therefore, the instructor **may** provide a certificate for renewal purposes to the student verifying these requirements have been met.

If students in this program are seeking a licensure, certificate, or registration through the Department of Health, please refer to 456.0635, F.S., for more information on disqualification for a license, certificate, or registration through the Department of Health.

Outcomes 01-11 are referred to as the Health Careers Core and do not have to be completed if the student has previously completed the Core in another health science program. The Core should be taken first or concurrently with the first course in the program. Following the successful completion of the core, the student is eligible to take the National Health Care Foundation Skill Standards Assessment with instructor approval and the completion of a portfolio.

General Education Course Requirements for AS and AAS Degrees

State Board of Education Rule 6A-14.030(4), F.A.C., identifies 15 credit hours as the minimum amount of general education coursework required in the Associate of Science (AS) degree and the Associate of Applied Science (AAS) degree. In addition, Rule 6A-14.0303, F.A.C., implements s. 1007.25, F.S., and requires students entering a technical education degree program in the 2022-2023 academic year, and thereafter, to complete at least one identified core course in each subject area as part of the general education course requirements (15 credit hours total) before a degree is awarded. The core subject areas include:

- Communication.
- Humanities.
- Mathematics.
- Natural Sciences.
- Social Sciences.

Career and Technical Student Organization (CTSO)

CTSOs are co-curricular career and technical student organizations providing leadership training and reinforcing specific career and technical skills. Career and Technical Student Organizations provide activities for students as an integral part of the instruction offered. Other CTSOs not listed in this curriculum framework or recognized by the Florida Department of Education are permissible provided they support student mastery over the standards and benchmarks of this curriculum framework.

Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology, and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

Florida Department of Education
Curriculum Framework

The standards and benchmarks for this program were updated for the 2026-27 academic year.

Program Title: **Health Services Management**
Career Cluster: **Health Science**

Associate in Science	
CIP Number	1351070101
Program Type	College Credit
Program Length	60 credit hours
CTSO	HOSA
SOC Codes (all applicable)	For program SOC codes, please see the Program and Course Tables section of the CTE Program Resources page linked below.
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml

Purpose

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Health Science career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of Health Science career cluster.

The purpose of this program is to prepare students for employment as health services managers (Medical and Health Services Managers) or health service administrators, or to provide supplemental training for persons previously or currently employed in these occupations.

The content includes but is not limited to communication skills, leadership skills, human relations and employability skills, principles of management, introduction to computer literacy, health care organization, medical ethics, legal aspects, and advanced technical skills in a chosen health-related profession, health and safety, and CPR.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Program Structure

This program is a planned sequence of instruction consisting of 60 credit hours.

When developing the course sequence for the local implementation of this program, select courses that:

- Meet the skill development requirements of the standards and benchmarks of this program.
- Meet the general education core course requirements of Rule 6A-14.0303, Florida Administrative Code.
- Where reasonable and practicable, align with programs offered by your institution or other postsecondary institutions in Florida, including:
    - Related CCC and ATD credentials.
    - Baccalaureate degrees within the same career pathway and/or Federal CIP code.

Visit FloridaShines' Discover Programs website to identify other institutions that offer similar programs to review their course sequencing. Where appropriate, course alignment between institutions offering related programs can facilitate interagency student articulation.

Visit FloridaShines' Common Prerequisites Manual to identify courses that are prerequisites for admission into an upper division program. When sub-baccalaureate courses are aligned to the course admissions requirements of baccalaureate programs with the same career pathway, students can enter upper division coursework seamlessly.

Florida's Career Readiness Skills for CTE Programs

Employability Skills	
01.0	Apply academic skills to workplace scenarios.
01.01	Use reading skills.
01.02	Use writing skills.
01.03	Use mathematical strategies and procedures.
01.04	Use scientific principles and procedures.
02.0	Design a solution to an industry problem.
02.01	Use critical thinking.
02.02	Use creativity.
02.03	Make sound decisions.
02.04	Solve problems.
02.05	Reason.
02.06	Plan and organize.
03.0	Manage resources within an industry project
03.01	Manage time.
03.02	Manage money or resources.
03.03	Manage materials.
03.04	Manage personnel.
04.0	Oversee the subcomponents, operations and output of a technical or organizational system.
04.01	Manage systems.
04.02	Monitor systems.
04.03	Improve systems.
05.0	Use information for decision making.
05.01	Locate information.
05.02	Organize information.
05.03	Use information.

	05.04 Analyze information.
	05.05 Communicate information.
06.0	Apply relevant technology to workplace scenarios to aid productivity.
	06.01 Use technology.
07.0	Interpret and express interpersonal communication.
	07.01 Communicate verbally.
	07.02 Listen actively.
	07.03 Comprehend written material.
	07.04 Convey information in writing.
	07.05 Communicate nonverbally.
	07.06 Interpret nonverbal communication.
08.0	Interact with others to accomplish workplace goals.
	08.01 Collaborate with others in a team.
	08.02 Respond to customer needs.
	08.03 Exercise leadership.
	08.04 Negotiate to resolve conflict.
	08.05 Respect others.
09.0	Manage personal behavior to maximize productivity and professional growth.
	09.01 Demonstrate responsibility and self-discipline.
	09.02 Adapt and show flexibility.
	09.03 Work independently.
	09.04 Demonstrate a willingness to learn.
	09.05 Demonstrate integrity.
	09.06 Demonstrate professionalism.
	09.07 Take initiative.
	09.08 Display positive attitude.
	09.09 Take responsibility for professional growth.

Job Attainment	
10.0	Find, assess and apply to job opportunities.
10.01	Identify online job posts relevant to his or her career aspirations.
10.02	Compare and contrast the job posts' required qualifications, job duties, compensation, benefits and employers.
10.03	Define what information, documentation and writing prompts are required for the positions.
11.0	Communicate personal competence, character and fit for a job opportunity.
11.01	Develop a resume.
11.02	Write a cover letter.
11.03	Curate a professional portfolio that includes work products.
11.04	Prepare for and experience a mock job interview.
12.0	Cultivate and leverage relationships to professionally advance.
12.01	Request a signed reference letter, letter of recommendation and/or an online skill/professionalism endorsement.
12.02	Develop a plan to cultivate a professional digital footprint.
12.03	Develop a networking plan for a specific industry of interest.

Standards

After successfully completing this program, the student will be able to perform the following:

01.0 Demonstrate knowledge of the healthcare delivery system and health occupations.
02.0 Demonstrate the ability to communicate and use interpersonal skills effectively.
03.0 Demonstrate legal and ethical responsibilities.
04.0 Recognize and practice safety standards and security procedures.
05.0 Demonstrate information technology applications in healthcare.
06.0 Demonstrate employability skills.
07.0 Demonstrate basic knowledge of medical language, anatomy and physiology, and disease processes.
08.0 Demonstrate knowledge of materials and supplies needed in healthcare settings.
09.0 Demonstrate leadership and administrative skills basic to management in any healthcare facility.
10.0 Demonstrate knowledge of appropriate human resource management in healthcare.
11.0 Demonstrate knowledge of the economics involved in healthcare.

Florida Department of Education
Student Performance Standards

Program Title: **Health Services Management**
CIP Number: **1351070101**
Program Length: **60 credit hours**

At the completion of this program, the student will be able to:	
01.0	Demonstrate knowledge of the healthcare delivery system and health occupations. The student will be able to:
01.01	Identify the basic components of the healthcare delivery system, including public, private, government, and non-profit.
01.02	Identify types of healthcare settings.
01.03	Identify the consumer perspective regarding healthcare.
01.04	Describe the composition and functions of a systemic healthcare team, including those not based in the healthcare facility (e.g., medical device representative and insurance claims adjuster).
01.05	Explain challenges impacting emerging issues, including technology, bioethics, and socioeconomics, on healthcare delivery systems.
02.0	Demonstrate the ability to communicate and use interpersonal skills effectively. The student will be able to:
02.01	Develop fundamental speaking and active listening skills.
02.02	Demonstrate effective verbal and written communication skills.
02.03	Recognize communication styles and barriers to utilize the most effective communication technique based on the situation.
02.04	Demonstrate appropriate situational communication by considering lifestyles, medical conditions, and generational and cultural differences.
02.05	Identify characteristics of effective teams and techniques for managing team conflict.
02.06	Use factual data to produce and deliver reliable and valid reports.
03.0	Demonstrate legal and ethical responsibilities. The student will be able to:
03.01	Identify illegal and unethical practices in the healthcare setting (e.g., liability, negligence, abandonment, false imprisonment, and fraud).
03.02	Explain the legal responsibilities of the consumer within the healthcare delivery system.
03.03	Explain the “Patient’s Bill of Rights.”

03.04	Identify the history, applications, and violations of the Health Insurance Portability and Accountability Act (HIPAA).
03.05	Recognize advance directives that allow patients and/or their legal guardians to document end-of-life care decisions.
03.06	Describe the informed consent process.
03.07	Differentiate between legal and ethical issues in healthcare and the key components of personal, professional, and organizational ethics.
03.08	Recognize responsibilities and reporting protocols within legal, ethical, and illegal practices.
03.09	Describe federal, state, and local institutional requirements.
03.10	Discuss the impact of current legislative changes on healthcare facilities.
04.0	Recognize and practice safety standards and security procedures. The student will be able to:
04.01	Recognize national and accrediting agency patient safety standards and the necessary protocols to mitigate, manage, and report safety hazards.
04.02	Explain how medical errors might occur and describe ways to prevent or mitigate such errors.
04.03	Demonstrate an understanding of the roles and responsibilities of the healthcare professional during manmade and natural disasters.
04.04	Identify risk management in healthcare settings.
04.05	Identify mandatory requirements regarding environmental health and safety standards in healthcare organizations.
05.0	Demonstrate information technology applications in healthcare. The student will be able to:
05.01	Demonstrate the ability to use a computer to perform business practices such as word processing, spreadsheets, presentations, and database management.
05.02	Recognize current and changing technology applications in healthcare.
05.03	Discuss methods of communication to access and distribute data, including patient portal, electronic messaging, Continuity of Care Documents (CCD), and Health Information Exchanges (HIE).
05.04	Interpret technological capabilities and challenges of Electronic Health Records (EHR) and applications in healthcare.
05.05	Demonstrate how health information is used for institutional and patient strategic planning, outcome assessment, and quality improvement.
05.06	Identify protected Patient Health Information (PHI) and methods for preventing PHI breaches and technology security.
05.07	Explain Meaningful Use as it relates to privacy, security, and access of patients' records.
06.0	Demonstrate employability skills. The student will be able to:

	06.01 Identify personal traits or attributes required to succeed as a member of the healthcare team.
	06.02 Demonstrate basic professional standards of healthcare workers as they apply to hygiene, dress, communication, and behavior (e.g., telephone, texting, email, social media, and professionalism).
	06.03 Model the process to seek employment, including but not limited to job search, cover letter, resume, application, interview, and thank you letter.
07.0	Demonstrate basic knowledge of medical language, anatomy and physiology, and disease processes. The student will be able to:
	07.01 Demonstrate knowledge of medical and clinical terminology related to healthcare.
	07.02 Describe the structure and function of different body systems.
	07.03 Demonstrate an understanding of the fundamentals of the disease process in relation to the human body.
08.0	Demonstrate knowledge of materials and supplies needed in healthcare settings. The student will be able to:
	08.01 Demonstrate a working knowledge of an effective inventory management system.
	08.02 Identify accounts payable practices (e.g., purchase orders and processing).
09.0	Demonstrate leadership and administrative skills basic to management in any healthcare facility. The student will be able to:
	09.01 Analyze attributes and attitudes of an effective leader.
	09.02 Identify current trends in change management within healthcare organizations.
	09.03 Identify the roles, responsibilities, and organizational structures for the various levels of management within healthcare organizations.
	09.04 Describe the control processes and techniques used to ensure that objectives, strategies, and policies of healthcare delivery are achieved effectively and efficiently.
	09.05 Demonstrate leadership skills in decision-making, meeting management, and communication.
	09.06 Apply personnel administration practices to the scope of labor relations, including manpower acquisition, maintenance, and utilization.
	09.07 Conduct needs analysis to identify and prioritize workflow requirements.
	09.08 Identify methods to monitor internal and external customer satisfaction and to implement improvements as needed.
	09.09 Explain required standards and procedures for the facility and staff.
10.0	Demonstrate knowledge of appropriate human resource management in healthcare. The student will be able to:
	10.01 Create effective job descriptions.

10.02	Demonstrate effective human resource management.
10.03	Illustrate employee satisfaction measurement and performance improvement strategies.
10.04	Prepare human resource policy and procedure manuals for healthcare organizations.
10.05	Identify effective recruitment and retention strategies.
10.06	Demonstrate key components of an employee performance evaluation.
10.07	Identify methods to assess and develop orientation and training programs for healthcare personnel.
11.0	Demonstrate knowledge of the economics involved in healthcare. The student will be able to:
11.01	Identify common methods, benefits, and challenges of payment for healthcare services.
11.02	Demonstrate knowledge of reimbursement methodologies for healthcare services.
11.03	Identify billing and insurance terminology.
11.04	Demonstrate understanding of the process of utilization review.
11.05	Demonstrate effective practices in accounts receivable and reimbursement systems.
11.06	Demonstrate knowledge of third-party reimbursements, including Center for Medicare/Medicaid Services (CMS) rulings and precedence to other payers.
11.07	Demonstrate basic knowledge of the procedures and purposes of medical documentation, medical billing, and coding.
11.08	Demonstrate knowledge of the revenue cycle.
11.09	Explain government impacts to reimbursement (i.e., value-based payment models, government incentive programs, self-pay models, and HCAPS scores).
11.10	Identify volume and growth strategies for healthcare agencies.

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as, experimental, quality, and safety procedures are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate and troubleshoot equipment/tools used to make observations. Students understand measurement error; and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

It is strongly recommended that hands-on practical experience be an integral part of the program.

Special Notes

The curriculum content must include: courses in management, personnel relations and management, governmental standards, and regulation of health care administration in diverse health care settings.

The theory base is built upon supportive courses available to students in the community college setting. Such courses shall include, but not be limited to, business communication, social science, business, mathematics, and computer application.

General Education Course Requirements for AS and AAS Degrees

State Board of Education Rule 6A-14.030(4), F.A.C., identifies 15 credit hours as the minimum amount of general education coursework required in the Associate of Science (AS) degree and the Associate of Applied Science (AAS) degree. In addition, Rule 6A-14.0303, F.A.C., implements s. 1007.25, F.S., and requires students entering a technical education degree program in the 2022-2023 academic year, and thereafter, to complete at least one identified core course in each subject area as part of the general education course requirements (15 credit hours total) before a degree is awarded) The core subject areas include:

- Communication.
- Humanities.
- Mathematics.
- Natural Sciences.
- Social Sciences.

Career and Technical Student Organization (CTSO)

CTSOs are co-curricular career and technical student organizations providing leadership training and reinforcing specific career and technical skills. Career and Technical Student Organizations provide activities for students as an integral part of the instruction offered. Other CTSOs not listed in this curriculum framework or recognized by the Florida Department of Education are permissible provided they support student mastery over the standards and benchmarks of this curriculum framework.

Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

Certificate Programs

A College Credit Certificate consists of a program of instruction of less than sixty (60) credits of college-level courses, which is part of an AS or AAS degree program and prepares students for entry into employment (Rule 6A-14.030, F.A.C.). This AS degree program includes the following College Credit Certificates:

Healthcare Services Specialist (0351070102) – 27 credit hours

Standards for the above certificate programs are contained in separate curriculum frameworks.

Florida Department of Education
Curriculum Framework

The standards and benchmarks for this program were updated for the 2026-27 academic year.

Program Title: **Health Information Technology**
Career Cluster: **Health Science**

Associate in Science	
CIP Number	1351070700
Program Type	College Credit
Program Length	70 credit hours
CTSO	HOSA
SOC Codes (all applicable)	For program SOC codes, please see the Program and Course Tables section of the CTE Program Resources page linked below.
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml

Purpose

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Health Science career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of Health Science career cluster.

This program is designed to prepare students for employment as Health Information Technicians, Medical Record Technicians (Medical Records and Health Information Technicians), or to provide supplemental training for persons previously or currently employed in these occupations.

The content includes but is not limited to health information management, ethical and medico-legal aspects, computer information technology for health records, biomedical sciences, including anatomy and physiology, medical terminology, pharmacology and pathophysiology, health record science, computer applications, word processing, data base management, and spreadsheet, health data content, analysis and structure, statistics and data literacy, coding, clinical classification systems, reimbursement methodologies, quality assessment and performance improvement, health care delivery systems, indexing, organization and supervision, professional practice experience, and employability skills.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Program Structure

This program is a planned sequence of instruction consisting of 70 credit hours.

When developing the course sequence for the local implementation of this program, select courses that:

- Meet the skill development requirements of the standards and benchmarks of this program.
- Meet the general education core course requirements of Rule 6A-14.0303, Florida Administrative Code.
- Where reasonable and practicable, align with programs offered by your institution or other postsecondary institutions in Florida, including:
    - Related CCC and ATD credentials.
    - Baccalaureate degrees within the same career pathway and/or Federal CIP code.

Visit FloridaShines' Discover Programs website to identify other institutions that offer similar programs to review their course sequencing. Where appropriate, course alignment between institutions offering related programs can facilitate interagency student articulation.

Visit FloridaShines' Common Prerequisites Manual to identify courses that are prerequisites for admission into an upper division program. When sub-baccalaureate courses are aligned to the course admissions requirements of baccalaureate programs with the same career pathway, students can enter upper division coursework seamlessly.

Florida's Career Readiness Skills for CTE Programs

Employability Skills	
01.0	Apply academic skills to workplace scenarios.
01.01	Use reading skills.
01.02	Use writing skills.
01.03	Use mathematical strategies and procedures.
01.04	Use scientific principles and procedures.
02.0	Design a solution to an industry problem.
02.01	Use critical thinking.
02.02	Use creativity.
02.03	Make sound decisions.
02.04	Solve problems.
02.05	Reason.
02.06	Plan and organize.
03.0	Manage resources within an industry project
03.01	Manage time.
03.02	Manage money or resources.
03.03	Manage materials.
03.04	Manage personnel.
04.0	Oversee the subcomponents, operations and output of a technical or organizational system.
04.01	Manage systems.
04.02	Monitor systems.
04.03	Improve systems.
05.0	Use information for decision making.
05.01	Locate information.
05.02	Organize information.
05.03	Use information.

	05.04 Analyze information.
	05.05 Communicate information.
06.0	Apply relevant technology to workplace scenarios to aid productivity.
	06.01 Use technology.
07.0	Interpret and express interpersonal communication.
	07.01 Communicate verbally.
	07.02 Listen actively.
	07.03 Comprehend written material.
	07.04 Convey information in writing.
	07.05 Communicate nonverbally.
	07.06 Interpret nonverbal communication.
08.0	Interact with others to accomplish workplace goals.
	08.01 Collaborate with others in a team.
	08.02 Respond to customer needs.
	08.03 Exercise leadership.
	08.04 Negotiate to resolve conflict.
	08.05 Respect others.
09.0	Manage personal behavior to maximize productivity and professional growth.
	09.01 Demonstrate responsibility and self-discipline.
	09.02 Adapt and show flexibility.
	09.03 Work independently.
	09.04 Demonstrate a willingness to learn.
	09.05 Demonstrate integrity.
	09.06 Demonstrate professionalism.
	09.07 Take initiative.
	09.08 Display positive attitude.
	09.09 Take responsibility for professional growth.

Job Attainment	
10.0	Find, assess and apply to job opportunities.
10.01	Identify online job posts relevant to his or her career aspirations.
10.02	Compare and contrast the job posts' required qualifications, job duties, compensation, benefits and employers.
10.03	Define what information, documentation and writing prompts are required for the positions.
11.0	Communicate personal competence, character and fit for a job opportunity.
11.01	Develop a resume.
11.02	Write a cover letter.
11.03	Curate a professional portfolio that includes work products.
11.04	Prepare for and experience a mock job interview.
12.0	Cultivate and leverage relationships to professionally advance.
12.01	Request a signed reference letter, letter of recommendation and/or an online skill/professionalism endorsement.
12.02	Develop a plan to cultivate a professional digital footprint.
12.03	Develop a networking plan for a specific industry of interest.

Standards

After successfully completing this program, the student will be able to perform the following:

Health Information Technology Core

01.0 Demonstrate an understanding of healthcare organizations and health occupations.
02.0 Demonstrate the ability to communicate and use interpersonal skills effectively.
03.0 Explore health informatics as a health professional.
04.0 Apply knowledge of health data concepts.
05.0 Manage the adoption of multiple formats of health records and the function of digital applications.
06.0 Apply Health Information Technology principles.
07.0 Apply classification systems, clinical vocabularies, and terminologies.
08.0 Evaluate ethical issues in Health Information professions.
09.0 Demonstrate compliance with laws, regulations, and standards that impact healthcare.
10.0 Apply policies, regulations, and standards to the management of information associated with treatment, payment, and operations (TPO).
11.0 Demonstrate computer knowledge and skills.
12.0 Demonstrate employability skills.

In addition, students will complete the objectives in one of the following specialization tracks:

Standards 13-20 must be completed by students specializing in the Medical Information Coder/Biller CCC or Medical Coder/Biller CCC, or ATD Track.

13.0 Describe the anatomy and physiology of the human body.
14.0 Demonstrate proficiency in the application of medical terminology.
15.0 Demonstrate an understanding of the fundamentals of disease processes in relation to the human body, including pharmacology.
16.0 Demonstrate proficiency in current medical code set systems and technology-assisted coding solutions.
17.0 Demonstrate proficiency in complex coding scenarios and value-based care requirements.
18.0 Articulate health information services within modern healthcare delivery systems related to the medical coder/biller.
19.0 Ensure professional and ethical behavior of a medical coder/biller in an evolving digital healthcare environment.
20.0 Participate in healthcare revenue cycle management processes.

Standards 21-29 must be completed by students specializing in the HealthCare Informatics Specialist CCC Track.

21.0 Examine the various informatics and data analytics-related disciplines.
22.0 Demonstrate ethical and legal principles with regard to the role of the informatics and data analytics specialist.
23.0 Apply appropriate resources in healthcare informatics and data analytics to retrieve and analyze relevant information.
24.0 Manage health data processes and systems.
25.0 Analyze healthcare data to support research and performance improvement initiatives.
26.0 Perform appropriate information technology system functions.
27.0 Perform project management principles and best practices.
28.0 Collaborate in the planning, design, selection, implementation, integration, testing, and support for health information systems.

29.0 Integrate healthcare informatics and data analytics skills through practical lab experiences.

Students must complete at least one of the specialization tracks above and standards 30-31 to obtain the Health Information Technology AS degree.

30.0 Collaborate in the planning, design, selection, implementation, integration, testing, and support for health information systems.

31.0 Utilize leadership principles and organizational resources.

Florida Department of Education
Student Performance Standards

Program Title: **Health Information Technology**
CIP Number: **1351070700**
Program Length: **70 credits**

At the completion of this program, the student will be able to:	
01.0	Demonstrate an understanding of healthcare organizations and health occupations. The student will be able to:
01.01	Discuss the evolution of healthcare.
01.02	Demonstrate an understanding of the infrastructure of healthcare in the United States.
01.03	Discuss healthcare regulatory agencies and organizations.
01.04	Recognize levels of education, credentialing requirements, employment opportunities, workplace environments, and career growth potential.
01.05	Summarize the roles of various providers and disciplines throughout the continuum of healthcare.
02.0	Demonstrate the ability to communicate and use interpersonal skills effectively. The student will be able to:
02.01	Apply basic speaking and active listening skills with meaningful feedback.
02.02	Identify characteristics of successful and unsuccessful communication, including barriers.
02.03	Demonstrate emotional intelligence (e.g., recognize verbal and non-verbal cues).
02.04	Demonstrate effective professional communication using correct spelling, grammar, formatting, and confidentiality.
02.05	Use appropriate medical terminology and abbreviations.
02.06	Promote health information training and awareness to internal/external stakeholders.
02.07	Model communication skills to varied levels of understanding and cultural orientation, including generational differences, cultural, socioeconomic, ethnic, and religious groups.
02.08	Distinguish between subjective and objective information.
03.0	Explore health informatics as a health professional. The student will be able to:
03.01	Discuss the past, present, and future of health information.
03.02	Examine professional opportunities related to health information.

	03.03 Demonstrate knowledge of industry-recognized credentials and professional associations applicable to the field of health information.
04.0	Apply knowledge of health data concepts. The student will be able to:
	04.01 Examine various health data uses and data sets.
	04.02 Identify various characteristics of health data quality and emerging standards.
05.0	Manage the adoption of multiple formats of health records and the function of digital applications. The student will be able to:
	05.01 Apply regulations and requirements of health information to the continuum of care.
	05.02 Analyze health information related to treatment, payment, and operations (TPO).
06.0	Apply Health Information Technology principles. The student will be able to:
	06.01 Explain how changing regulations and technology impact the health information field.
	06.02 Validate the accuracy, integrity, and reliability of information from health information systems and applications in healthcare.
	06.03 Demonstrate proficiency and understanding of creation, use, storage, retrieval, and exchange of health data.
07.0	Apply classification systems, clinical vocabularies, and terminologies. The student will be able to:
	07.01 Demonstrate the use of classification systems, clinical vocabularies, terminologies, and nomenclatures.
08.0	Evaluate ethical issues in Health Information professions. The student will be able to:
	08.01 Interpret the industry-recognized code of ethics for healthcare information practices.
	08.02 Analyze ethical issues related to health information.
	08.03 Manage ethical issues related to treatment, payment, and operations.
09.0	Demonstrate compliance with laws, regulations, and standards that impact healthcare. The student will be able to:
	09.01 Advocate the importance of maintaining ethical and legal standards in gathering, securing, managing, and analyzing health information.
	09.02 Identify all regulations, laws, and standards that impact health information, including the Health Insurance Portability and Accountability Act (HIPAA).
	09.03 Explain the composition of the legal health record.
	09.04 Apply health information policies and procedures for privacy, confidentiality, and security.

	09.05 Articulate legal terms and processes that impact healthcare.
10.0	Apply policies, regulations, and standards to the management of information associated with treatment, payment, and operations (TPO). The student will be able to:
	10.01 Describe how regulatory change impacts workflow.
	10.02 Demonstrate knowledge of policies and procedures for access and disclosure of protected health information to authorized users.
	10.03 Adhere to appropriate and applicable healthcare regulatory and accrediting agency guidelines.
11.0	Demonstrate computer knowledge and skills. The student will be able to:
	11.01 Demonstrate the ability to create, manage, organize, attach, and retrieve files.
	11.02 Demonstrate the ability to connect to and perform research using search engines and by identifying reputable websites.
	11.03 Demonstrate proficiency in word processing, spreadsheets, and presentation software.
	11.04 Demonstrate the ability to manage software programs.
	11.05 Demonstrate knowledge of safe computer practices and security procedures such as encryption, passwords, and biometrics.
12.0	Demonstrate employability skills. The student will be able to:
	12.01 Identify and exemplify professional traits desirable in a member of the healthcare team.
	12.02 Demonstrate professional standards of healthcare workers as they apply to hygiene, dress, language, and behavior (e.g., telephone and email etiquette, social media, courtesy, and self-introductions).
	12.03 Identify necessary documentation that may be required when applying for a healthcare position.
	12.04 Model the process to obtain employment, including but not limited to job search, cover letter, resume, application, interview, and thank you letter.
Standards 13-20 must be completed by students specializing in the Medical Coder/Biller ATD Track.	
13.0	Describe the anatomy and physiology of the human body. The student will be able to:
	13.01 Describe the structure and function of the respiratory system.
	13.02 Describe the structure and function of the circulatory system.
	13.03 Describe the structure and function of the musculoskeletal and connective tissue systems.
	13.04 Describe the structure and function of nervous and sensory systems.

	13.05 Describe the structure and function of the reproductive system.
	13.06 Describe the structure and function of the urinary system.
	13.07 Describe the structure and function of the digestive system.
	13.08 Describe the structure and function of the endocrine system.
	13.09 Describe the structure and function of the integumentary system.
	13.10 Describe major mental health disorders.
14.0	Demonstrate proficiency in the application of medical terminology. The student will be able to:
	14.01 Identify word parts of medical terminology in daily use.
	14.02 Build, spell, and pronounce correctly appropriate terms from word parts and be able to define the word.
	14.03 Identify word parts and be able to build, spell, and understand new words with those parts.
	14.04 Spell and use medical abbreviations.
	14.05 Identify terminology specific to healthcare settings, including surgical, medical, and therapeutic.
	14.06 Apply medical reference sources.
15.0	Demonstrate an understanding of the fundamentals of disease processes in relation to the human body, including pharmacology. The student will be able to:
	15.01 Demonstrate an understanding of the predisposing factors and direct causes of disease as they relate to the human body.
	15.02 Demonstrate an understanding of the general pathogenesis and morphology of disease and its role in the disease process.
	15.03 Demonstrate an understanding of pharmacological agents, uses, treatments, and utilize drug reference sources.
	15.04 Identify and use diagnostic test terminology.
16.0	Demonstrate proficiency in current medical code set systems and technology-assisted coding solutions. The student will be able to:
	16.01 Apply coding conventions and guidelines when utilizing Computer-Assisted Coding (CAC) and Natural Language Processing (NLP) technologies.
	16.02 Implement processes for maintaining and updating coding resources, including automated updates and coding software maintenance.
	16.03 Validate codes using both manual and automated systems, including diagnosis, procedure, HCPCS level II codes, APCs, and applicable modifiers and groupings according to current official guidelines.

	16.04	Perform coding using current versions of ICD-10-CM, ICD-10-PCS, CPT, and HCPCS Level II in both traditional and virtual healthcare settings, including telehealth services.
	16.05	Analyze the impact of Social Determinants of Health (SDoH) coding on revenue cycle management and participate in Clinical Documentation Integrity (CDI) programs using modern technology solutions.
	16.06	Evaluate documentation compliance using automated auditing tools and Artificial Intelligence (AI)-assisted documentation improvement systems.
17.0	Demonstrate proficiency in complex coding scenarios and value-based care requirements. The student will be able to:	
	17.01	Apply coding concepts to complex cases, including post-acute care and virtual health encounters.
	17.02	Utilize advanced analytics tools to assess case-mix index, hierarchical condition categories (HCCs), risk adjustment factors, and quality metrics for value-based reimbursement.
	17.03	Analyze cases across the contemporary healthcare continuum, including remote patient monitoring and digital health services.
	17.04	Apply various classification systems, including ICD-O, DSM, ICF, and emerging code sets for precision medicine and genomics.
18.0	Articulate health information services within modern healthcare delivery systems related to the medical coder/biller. The student will be able to:	
	18.01	Collaborate with interdisciplinary teams in various departments through digital communication platforms and shared health information systems.
	18.02	Utilize electronic health records (EHRs) and other digital health information systems content in various settings.
	18.03	Educate stakeholders on regulatory compliance, including information blocking rules, interoperability requirements, and privacy regulations.
19.0	Ensure professional and ethical behavior of a medical coder/biller in an evolving digital healthcare environment. The student will be able to:	
	19.01	Advocate for the expanding role of the medical coder/biller in data analytics and population health management.
	19.02	Adhere to ethical coding practices in AI and automated coding systems.
20.0	Participate in healthcare revenue cycle management processes. The student will be able to:	
	20.01	Prepare claims using electronic claims submission systems and automated verification tools.
	20.02	Analyze various payment methodologies (e.g., value-based and alternative payment models).
	20.03	Utilize modern accounting software and patient financial engagement platforms.
	20.04	Apply reimbursement methodologies for emerging healthcare delivery models, including telehealth and remote patient monitoring, in various settings.
	20.05	Maintain digital charge capture systems and management tools in various settings.

	20.06 Implement compliance strategies for regulatory requirements (e.g., price transparency and surprise billing regulations).
Standards 21-29 must be completed by students specializing in the Healthcare Informatics Specialist CCC Track.	
21.0	Examine the various informatics and data analytics-related disciplines. The student will be able to:
	21.01 Analyze the evolution, current state, and future trends of informatics and data analytics related disciplines.
	21.02 Apply comprehensive knowledge of health data standards for the implementation of health information systems.
22.0	Demonstrate ethical and legal principles with regard to the role of the informatics and data analytics specialist. The student will be able to:
	22.01 Apply the Code of Ethics to informatics and data analytics as it relates to professional organizations.
	22.02 Identify the scope of work of the healthcare informatics and data analytics specialist, including ethical and legal responsibilities.
23.0	Apply appropriate resources in healthcare informatics and data analytics to retrieve and analyze relevant information. The student will be able to:
	23.01 Identify credible informatics and data analytics resources for retrieving and analyzing relevant information.
	23.02 Utilize case studies and best practices to analyze informatics and data analytics concepts.
24.0	Manage health data processes and systems. The student will be able to:
	24.01 Oversee the collection and maintenance of health data, data sets, quality indicators, and databases.
	24.02 Apply policies and procedures to health informatics and data analytics processes.
	24.03 Verify data quality, standards, and data sources for all health information systems across the continuum of care.
	24.04 Participate in database management such as data entry, data display design, and database language.
	24.05 Identify standards for the exchange of health information.
25.0	Analyze healthcare data to support research and performance improvement initiatives. The student will be able to:
	25.01 Analyze data for clinical indices/databases/registries.
	25.02 Model data as representative visual information to achieve desired outcomes.
	25.03 Calculate basic descriptive, institutional, and healthcare statistics.
	25.04 Examine common research methods in accordance with Institutional Review Board (IRB) processes and policies.
	25.05 Utilize technologies for trend analysis, end-user support, decision-making, and strategic planning.

	25.06 Report data for facility-wide quality management and performance improvement programs.
26.0	Perform appropriate information technology system functions. The student will be able to:
	26.01 Perform\ graphical representations from healthcare data reports that have been accurately calculated, interpreted, and summarized using statistical software.
	26.02 Utilize specialized technologies and AI applications affiliated with treatment, payment, and operations (TPO).
	26.03 Apply policies and procedures to streamline the use of electronic health records (EHR), personal health records (PHR), public health systems, and related applications and networks.
	26.04 Utilize knowledge of database modeling to address departmental needs.
	26.05 Facilitate the implementation, maintenance, and decommissioning of an information system or application.
	26.06 Perform database queries, analyses, and presentations of data to facilitate decision-making.
	26.07 Utilize tools and techniques for information retention, archiving, and destruction per state and federal regulations.
	26.08 Protect data integrity by preventing unauthorized access using software and hardware technologies
27.0	Perform project management principles and best practices. The student will be able to:
	27.01 Demonstrate an understanding of the general principles and tools of informatics and data analytics project management.
	27.02 Demonstrate teamwork, resource allocation, and problem-solving skills in healthcare informatics and data analytics projects.
28.0	Collaborate in the planning, design, selection, implementation, integration, testing, and support for health information systems. The student will be able to:
	28.01 Apply appropriate data collection methods, considering end user perspectives and needs.
	28.02 Demonstrate interoperability standards to ensure data sharing across systems.
	28.03 Identify technological and changing management issues and problem resolution associated with health information systems.
	28.04 Apply S.M.A.R.T. goals for projects using evidence-based information and research to inform decisions and justify actions.
	28.05 Analyze workflow within an electronic health record.
	28.06 Summarize the various types of information systems and their applications.
	28.07 Analyze problems, promote solutions, and encourage decision-making in implementing health information systems.
	28.08 Identify cybersecurity risks across physical, virtual, and network areas.

	28.09 Develop training materials for various individuals, groups, and populations.
	28.10 Identify health information system practices globally.
	28.11 Examine data generated from advanced digital applications to review the security, authenticity, or reliability of the data generated.
29.0	Integrate healthcare informatics and data analytics skills through practical lab experiences. The student will be able to:
	29.01 Demonstrate the health informatics and data analytics specialist role as a team leader or project manager.
	29.02 Apply knowledge and skills as they relate to project management.
	29.03 Access data in databases using analytic software.
	29.04 Apply healthcare informatics, data analytics principles, and best practices in real-world scenarios.
Students must complete at least one of the specialization tracks above and standards 30-31 to obtain the Health Information Technology AS degree.	
30.0	Collaborate in the planning, design, selection, implementation, integration, testing, and support for health information systems. The student will be able to:
	30.01 Apply appropriate data collection methods considering end user perspectives and needs.
	30.02 Demonstrate interoperability standards to ensure data sharing across systems.
	30.03 Identify technological and change management issues and problem resolution associated with health information systems.
	30.04 Apply S.M.A.R.T. goals for projects using evidence-based information and research to inform decisions and justify actions.
	30.05 Analyze workflow within an electronic health record.
	30.06 Summarize the various types of information systems theory and their applications.
	30.07 Analyze problems, promote solutions, and encourage decision-making in implementing health information systems.
	30.08 Identify cybersecurity risks, including physical, virtual, and network areas.
	30.09 Develop training materials for various individuals, groups, and populations.
	30.10 Identify the influence and scope of health information system practices globally.
	30.11 Examine data generated from advanced digital applications to review the security, authenticity, or reliability of the data generated.
31.0	Utilize leadership principles and organizational resources. The student will be able to:

31.01	Demonstrate fundamental leadership skills.
31.02	Identify the organizational change impact on processes, people, and systems.
31.03	Identify human resources and productivity standards for optimal practices.
31.04	Utilize data-driven techniques to improve performance and achieve outcomes.
31.05	Evaluate cost-effectiveness and cost-benefit analysis of budget priorities.
31.06	Identify policies and strategies for AI and information governance.
31.07	Apply strategies that promote cultural competence.
31.08	Implement legal and regulatory requirements for an ethical AI and information governance infrastructure.
31.09	Participate in privacy, security, and confidentiality training programs.
31.10	Identify risk mitigation strategies (e.g., AI usage, emergency planning, and patient care).

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as, experimental, quality, and safety procedures are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate and troubleshoot equipment/tools used to make observations. Students understand measurement error; and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

Special Notes

The program should meet the program standards and guidelines of the Commission on Accreditation for Health Informatics and Information Management Education (CAHIIM). The program should encompass the AHIMA established knowledge clusters and entry-level competencies for Registered Health Information Technicians (RHIT's). It prepares the student to take the AHIMA national certification examination for Registered Health Information Technicians (RHIT).

This program should be taught in accordance with the accreditation standards of: The Commission on Accreditation for Health Informatics and Information Management Education (CAHIIM), 233 North Michigan Ave., 21st Floor, Chicago, IL 60601-5800 (312/233-1100) www.cahiim.org

Students should be encouraged to join the (AHIMA) American Health Information Management Association and/or (AAPC) American Academy of Professional Coders and participate in the state/local association.

Outcomes 01-12 are referred to as the Health Information Technology core and do not have to be completed if the students have previously completed the core in another program at any level. The Core should be taken first in the program.

General Education Course Requirements for AS and AAS Degrees

State Board of Education Rule 6A-14.030(4), F.A.C., identifies 15 credit hours as the minimum amount of general education coursework required in the Associate of Science (AS) degree and the Associate of Applied Science (AAS) degree. In addition, Rule 6A-14.0303, F.A.C., implements s. 1007.25, F.S., and requires students entering a technical education degree program in the 2022-2023 academic year, and thereafter, to complete at least one identified core course in each subject area as part of the general education course requirements (15 credit hours total) before a degree is awarded. The core subject areas include:

- Communication.
- Humanities.
- Mathematics.
- Natural Sciences.
- Social Sciences.

Career and Technical Student Organization (CTSO)

CTSOs are co-curricular career and technical student organizations providing leadership training and reinforcing specific career and technical skills. Career and Technical Student Organizations provide activities for students as an integral part of the instruction offered. Other CTSOs not listed in this curriculum framework or recognized by the Florida Department of Education are permissible provided they support student mastery over the standards and benchmarks of this curriculum framework.

Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

Certificate Programs

A College Credit Certificate consists of a program of instruction of less than sixty (60) credits of college-level courses, which is part of an AS or AAS degree program and prepares students for entry into employment (Rule 6A-14.030, F.A.C.). This AS degree program includes the following College Credit Certificate:

Healthcare Informatics Specialist (0351070712) – 24 credit hours
Medical Information Coder/Biller (0351071404) – 37 credit hours

Standards for the above certificate programs are contained in separate curriculum frameworks.

Florida Department of Education
Curriculum Framework

The standards and benchmarks for this program were updated for the 2026-27 academic year.

Program Title: **Clinical Research Professional**
Career Cluster: **Health Science**

Associate in Science	
CIP Number	1351071902
Program Type	College Credit
Program Length	60 credit hours
CTSO	HOSA
SOC Codes (all applicable)	For program SOC codes, please see the Program and Course Tables section of the CTE Program Resources page linked below.
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml

Purpose

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Health Science career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of Health Science career cluster.

The purpose of this program is to prepare students for employment as clinical research coordinators (Natural Science Manager), (Medical and Health Services Manager), (Manager All Other), or (Healthcare Support Workers, All Other) or to provide supplemental training for persons previously or currently employed in these occupations.

The content includes but is not limited to communication skills, leadership skills, human relations and employability skills, principles of management, introduction to computer literacy, health care organization, medical ethics, legal aspects, and advanced technical skills in a chosen health-related profession, health and safety, and CPR.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Program Structure

This program is a planned sequence of instruction consisting of 60 credit hours.

When developing the course sequence for the local implementation of this program, select courses that:

- Meet the skill development requirements of the standards and benchmarks of this program.
- Meet the general education core course requirements of Rule 6A-14.0303, Florida Administrative Code.
- Where reasonable and practicable, align with programs offered by your institution or other postsecondary institutions in Florida, including:
    - Related CCC and ATD credentials.
    - Baccalaureate degrees within the same career pathway and/or Federal CIP code.

Visit FloridaShines' Discover Programs website to identify other institutions that offer similar programs to review their course sequencing. Where appropriate, course alignment between institutions offering related programs can facilitate interagency student articulation.

Visit FloridaShines' Common Prerequisites Manual to identify courses that are prerequisites for admission into an upper division program. When sub-baccalaureate courses are aligned to the course admissions requirements of baccalaureate programs with the same career pathway, students can enter upper division coursework seamlessly.

Florida's Career Readiness Skills for CTE Programs

Employability Skills	
01.0	Apply academic skills to workplace scenarios.
01.01	Use reading skills.
01.02	Use writing skills.
01.03	Use mathematical strategies and procedures.
01.04	Use scientific principles and procedures.
02.0	Design a solution to an industry problem.
02.01	Use critical thinking.
02.02	Use creativity.
02.03	Make sound decisions.
02.04	Solve problems.
02.05	Reason.
02.06	Plan and organize.
03.0	Manage resources within an industry project
03.01	Manage time.
03.02	Manage money or resources.
03.03	Manage materials.
03.04	Manage personnel.
04.0	Oversee the subcomponents, operations and output of a technical or organizational system.
04.01	Manage systems.
04.02	Monitor systems.
04.03	Improve systems.
05.0	Use information for decision making.
05.01	Locate information.
05.02	Organize information.
05.03	Use information.

	05.04 Analyze information.
	05.05 Communicate information.
06.0	Apply relevant technology to workplace scenarios to aid productivity.
	06.01 Use technology.
07.0	Interpret and express interpersonal communication.
	07.01 Communicate verbally.
	07.02 Listen actively.
	07.03 Comprehend written material.
	07.04 Convey information in writing.
	07.05 Communicate nonverbally.
	07.06 Interpret nonverbal communication.
08.0	Interact with others to accomplish workplace goals.
	08.01 Collaborate with others in a team.
	08.02 Respond to customer needs.
	08.03 Exercise leadership.
	08.04 Negotiate to resolve conflict.
	08.05 Respect others.
09.0	Manage personal behavior to maximize productivity and professional growth.
	09.01 Demonstrate responsibility and self-discipline.
	09.02 Adapt and show flexibility.
	09.03 Work independently.
	09.04 Demonstrate a willingness to learn.
	09.05 Demonstrate integrity.
	09.06 Demonstrate professionalism.
	09.07 Take initiative.
	09.08 Display positive attitude.
	09.09 Take responsibility for professional growth.

Job Attainment	
10.0	Find, assess and apply to job opportunities.
10.01	Identify online job posts relevant to his or her career aspirations.
10.02	Compare and contrast the job posts' required qualifications, job duties, compensation, benefits and employers.
10.03	Define what information, documentation and writing prompts are required for the positions.
11.0	Communicate personal competence, character and fit for a job opportunity.
11.01	Develop a resume.
11.02	Write a cover letter.
11.03	Curate a professional portfolio that includes work products.
11.04	Prepare for and experience a mock job interview.
12.0	Cultivate and leverage relationships to professionally advance.
12.01	Request a signed reference letter, letter of recommendation and/or an online skill/professionalism endorsement.
12.02	Develop a plan to cultivate a professional digital footprint.
12.03	Develop a networking plan for a specific industry of interest.

Standards

After successfully completing this program, the student will be able to perform the following:

01.0 Demonstrate basic knowledge of medical language, anatomy and physiology.
02.0 Demonstrate knowledge of the major Public Health, Bio-Medical, Sociological, Psychological and Ethical theories and how they relate to clinical research and care.
03.0 Demonstrate knowledge of the use of scientific methods in examining health related behaviors and their impact on individual and community level factors.
04.0 Identify and apply basic knowledge of different aspects of wellness.
05.0 Demonstrate knowledge of health communication and its impact on health outcomes.
06.0 Demonstrate knowledge of the three primary levels of prevention.
07.0 Demonstrate the use of evidence to draw conclusions about disease etiology.
08.0 Demonstrate knowledge of current events in the fields of public health biomedical science and clinical research.
09.0 Demonstrate the ability to identify U.S. health care delivery funding sources.
10.0 Demonstrate knowledge of funding and site sponsorship related to clinical research including public/private grants and contracts and lifecycles of clinical trials.
11.0 Demonstrate knowledge of the research process including consent, screening, phases of clinical trials, product development and adverse events and safety.
12.0 Demonstrate knowledge of the guidelines and regulations governing clinical trials.
13.0 Demonstrate ability to work as a clinical research professional.
14.0 Demonstrate knowledge of compliance and monitoring practices in clinical research.
15.0 Demonstrate knowledge of Institutional Review Board functions and operations including purpose, review types and composition. In addition, ethical issues within clinical research will be introduced.
16.0 Demonstrate knowledge of the principles and language of pharmacology, including drugs and drug classes, diagnostic tests, indications, techniques.

Florida Department of Education
Student Performance Standards

Program Title: **Clinical Research Professional**
CIP Number: **1351071902**
Program Length: **60 credit hours**

At the completion of this program, the student will be able to:	
01.0	Demonstrate basic knowledge of medical terminology, anatomy and physiology. The student will be able to:
01.01	Define, describe and discuss anatomic names and descriptive terms of the body.
01.02	Demonstrate an understanding of basic patient discharge and transfer procedures.
01.03	Describe common abbreviations and commonly used medical terms and their proper usage.
02.0	Demonstrate knowledge of the major Public Health, Bio-Medical, Sociological, Psychological and Ethical theories and how they relate to clinical research and care. The student will be able to:
02.01	Define ethical theories in philosophy and how they are used in evaluating contemporary issues in clinical care.
02.02	Describe applications of ethical codes.
02.03	Explain variations in ethical standards across health research settings.
02.04	Explain the ethical consideration of artificial intelligence (AI) technologies in research, data collection and analysis, health care delivery and documentation, and individual healthcare decisions.
02.05	Recognize and report various forms of abuse (e.g., trafficking, domestic violence, and neglect).
02.06	Identify evidence-based prevention strategies and interventions for victims of abuse.
03.0	Demonstrate knowledge of the use of scientific methods in examining health related behaviors and their impact on individual and community level factors. The student will be able to:
03.01	Define and discuss sociological structures.
03.02	Define and discuss socialization, social stratification and individual societal roles.
03.03	Explain societal influences and behaviors, factors that influence population density, and the impact of international health policies.
03.04	Identify and describe safety principles in the online environment for privacy and security of patient medical information and organizational processes.
04.0	Identify and apply basic knowledge of different aspects of wellness. The student will be able to:

	04.01	Discuss integrating health living into one's lifestyle.
	04.02	Define how physical fitness, mental health, nutrition, substance use and abuse, and family influences connect with the concept of patient wellness.
	04.03	Describe the impact of social media and time in the digital environment on physical and mental health and wellness.
	04.04	Identify the risk factors for cardiovascular disease.
	04.05	Describe the effects of tobacco, smoking and vaping.
	04.06	Describe the various fitness methods to improve health.
	04.07	Discuss the effects of nutrition on health and wellness.
	04.08	Explain body composition and achieving a healthy weight.
	04.09	Describe stress management strategies.
	04.10	Discuss the use and abuse of illicit drugs in society.
	04.11	Describe the effects of chronic disease on the human body.
05.0	Demonstrate knowledge of health communication and its impact on health outcomes. The student will be able to:	
	05.01	Discuss implementation methods of prevention used in public health: education, motivation and obligation.
	05.02	Describe the three levels of prevention in public health: primary, secondary and tertiary.
	05.03	Explain how preventative methods can be used throughout the life-cycle.
	05.04	Identify individual and community prevention needs in order to connect available resources to distressed areas.
	05.05	Summarize specific primary prevention methods including vaccinations, exercise, nutrition counseling, and birth control.
	05.06	Summarize secondary prevention methods, including screening for risk factors of disease and injury prevention.
	05.07	Summarize specific tertiary prevention methods, including treatment to control symptoms and prevent complications.
06.0	Demonstrate knowledge of the three primary levels of prevention. The student will be able to:	
	06.01	Discuss implementation methods of prevention used in public health: education, motivation and obligation.
	06.02	Describe the three levels of prevention in public health: primary, secondary and tertiary.
	06.03	Explain how preventative methods can be used throughout the life-cycle.

	06.04 Identify individual and community prevention needs in order to connect available resources to distressed areas.
	06.05 Summarize specific primary prevention methods including vaccinations, exercise, nutrition counseling, and birth control.
	06.06 Summarize secondary prevention methods, including screening for risk factors of disease and injury prevention.
	06.07 Summarize specific tertiary prevention methods, including treatment to control symptoms and prevent complications.
07.0	Demonstrate the use of evidence to draw conclusions about disease etiology. The student will be able to:
	07.01 Define evidenced based thinking in public health.
	07.02 Identify evidence-based recommendations to determine disease etiology, benefits and basic recommendations for prevention.
	07.03 Discuss health information concepts related to economic, legal and social issues.
	07.04 Investigate a problem by using evidenced based thinking skills to define health related issues and determine what information is necessary to make a decision.
	07.05 Locate and evaluate online health information to determine appropriate audiences are reached using specific content to the demographic group.
08.0	Demonstrate knowledge of current events in the field of public health biomedical science and clinical research. The student will be able to:
	08.01 Identify sources and platforms (e.g., news, media, and government) used to communicate public health events to the general public.
	08.02 Describe the implications of current events on public health.
	08.03 Discuss concerns related to how public health information is relayed to the public.
	08.04 Recognize how reporting of global events (e.g., epidemics, regime change, and weather events) has the potential to impact other areas.
	08.05 Locate emerging public health trends.
	08.06 Explain etiology of emerging public health trends discussed throughout semester.
	08.07 Discuss legislation designed to protect the public's right to information during major health events (epidemics, terrorism, natural disasters).
09.0	Demonstrate the ability to identify U.S. health care delivery funding sources. The student will be able to:
	09.01 Describe changes landscape of health services and its relevance on the existing healthcare systems, facilities, and services.
	09.02 Explain the impacts of public policies on healthcare, such as availability of healthcare services, cost, delivery, and financial implications.
	09.03 Describe the various health care organizations and service delivery options.

	09.04 Identify health professions and explain the role of each and their licensing/educational requirements.
	09.05 Compare and contrast the health care delivery systems of the U.S. with other countries
	09.06 Understand the array of career choices in the health care sector of the economy.
	09.07 Discuss the various sources and uses of funds for healthcare.
10.0	Demonstrate knowledge of funding and site sponsorship related to clinical research including: public/private grants and contracts and lifecycles of clinical trials. The student will be able to:
	10.01 Describe key concepts and skills used in the site-sponsor relationship.
	10.02 Classify clinical research funding sources and the protocols used to secure funding.
	10.03 Discuss constructs related to grants and contracts management in clinical research.
	10.04 Demonstrate knowledge of lifecycles in clinical trials.
	10.05 Define terms and language used in startup and closing of a clinical research trail.
	10.06 Determine communication methods used in the startup and closing of a clinical research trails.
11.0	Demonstrate knowledge of the research process including: consent, screening, phases of clinical trials, product development and adverse events and safety. The student will be able to:
	11.01 Describe processes involved in clinical research.
	11.02 Define and describe issues associated with participant consent and assent.
	11.03 Explain the goals, limitations and basic rules for screening participants.
	11.04 Discuss aspects of product development (drugs and devices).
	11.05 Discuss impacts of clinical trial stakeholders.
	11.06 Accurately describe how epidemiology is used in clinical research.
	11.07 Explain processes related to adverse events and safety.
12.0	Demonstrate knowledge of the guidelines and regulations governing clinical trials. The student will be able to:
	12.01 Understand guidelines and regulations governing clinical trials.
	12.02 Describe HIPPAA and clinical research privacy issues.

12.03	Identify Good Clinical Practices/ International Conference on Harmonization guidelines related human subject research.
12.04	Discuss sources and uses of essential documentations generated from clinical trails.
12.05	Explain the role of compliance in maintaining fidelity to a study protocol.
12.06	Provide examples of a standard response to a request for documentation of meeting award conditions.
12.07	Understand quantitative and qualitative analysis techniques used in interpreting research findings.
13.0	Demonstrate ability to work as a clinical research professional. The student will be able to:
13.01	Identify clinical and behavioral research settings where Clinical Research Professionals are employed.
13.02	Demonstrate an understanding of the essential duties of a Clinical Research Professional.
13.03	Describe procedures and processes used to protect research participants.
13.04	Discuss research activities of placement site.
13.05	Demonstrate an understanding of how placement site works with: local, county, state and federal agencies to carry out their research activities.
13.06	Evaluate the role of Clinical Research Professionals in research settings.
13.07	Demonstrate the skills necessary to be a productive member of a research team including; working on a multidisciplinary research team and demonstrating an ability to work with confidential research participant information.
14.0	Demonstrate knowledge of compliance and monitoring practice in clinical research. The student will be able to:
14.01	Describe the role of compliance in clinical research.
14.02	Identify issues related to compliance in human subject research.
14.03	Explain activities associated with monitoring clinical research trails.
14.04	Discuss processes used to resolve issues that may arise from a monitoring site visit.
14.05	Provide examples of quality assurance audits used in clinical research and discuss their value in relation to performing research with human subjects.
14.06	Define the types of inspections clinical research facilities are subject to.
15.0	Demonstrate knowledge of Institutional Review Board functions and operations including purpose, review types and composition. In addition, ethical issues within clinical research will be introduced. The student will be able to:
15.01	Define an IRB's: purpose and membership.

	15.02 Explain the historical significance of IRBs.
	15.03 Explain the goals, limitations and basic rules for screening participants.
	15.04 Provide examples of international and federal laws that guide the duties IRBs.
	15.05 Discuss IRB: functions and operations.
	15.06 Describe IRB: document review and approval.
	15.07 Classify and demonstrate an understanding of IRB review processes: expedited Review vs. Continuing Review
	15.08 Identify essential documents used by the IRB: approval and review letters, site and staff documents.
16.0	Demonstrate knowledge of the principles and language of pharmacology, including drugs and drug classes, diagnostic tests, indications, techniques. The student will be able to:
	16.01 Describe pharmacological principles.
	16.02 Classify routes of administration.
	16.03 Describe the relationship between drug classes and disease processes within medical specialties.
	16.04 Recognize commonly prescribed medications
	16.05 Use appropriate pharmacological and laboratory references.
	16.06 Describe indications, actions, dosages, and routes of administration.

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as, experimental, quality, and safety procedures are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate and troubleshoot equipment/tools used to make observations. Students understand measurement error; and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

General Education Course Requirements for AS and AAS Degrees

State Board of Education Rule 6A-14.030(4), F.A.C., identifies 15 credit hours as the minimum amount of general education coursework required in the Associate of Science (AS) degree and the Associate of Applied Science (AAS) degree. In addition, Rule 6A-14.0303, F.A.C., implements s. 1007.25, F.S., and requires students entering a technical education degree program in the 2022-2023 academic year, and thereafter, to complete at least one identified core course in each subject area as part of the general education course requirements (15 credit hours total) before a degree is awarded) The core subject areas include:

- Communication.
- Humanities.
- Mathematics.
- Natural Sciences.
- Social Sciences.

Career and Technical Student Organization (CTSO)

CTSOs are co-curricular career and technical student organizations providing leadership training and reinforcing specific career and technical skills. Career and Technical Student Organizations provide activities for students as an integral part of the instruction offered. Other CTSOs not listed in this curriculum framework or recognized by the Florida Department of Education are permissible provided they support student mastery over the standards and benchmarks of this curriculum framework.

Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

Certificate Programs

A College Credit Certificate consists of a program of instruction of less than sixty (60) credits of college-level courses, which is part of an AS or AAS degree program and prepares students for entry into employment (Rule 6A-14.030, F.A.C.). This AS degree program includes the following College Credit Certificates:

Clinical Research Coordinator (0351071901) – 30 credit hours

Standards for the above certificate programs are contained in separate curriculum frameworks.

Florida Department of Education
Curriculum Framework

The standards and benchmarks for this program were updated for the 2026-27 academic year.

Program Title: **Medical Assisting Advanced**
Career Cluster: **Health Science**

Associate in Science	
CIP Number	1351080103
Program Type	College Credit
Program Length	65 credit hours
CTSO	HOSA
SOC Codes (all applicable)	For program SOC codes, please see the Program and Course Tables section of the CTE Program Resources page linked below.
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml

Purpose

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Health Science career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of the Health Science career cluster.

This program is designed to prepare students for employment as medical assistants.

The content includes but is not limited to communication, transcultural communication in healthcare, interpersonal skills, legal and ethical responsibilities, health-illness concepts, administrative and clinical duties, emergency procedures including CPR and first aid, emergency preparedness, safety and security procedures, medical terminology, anatomy and physiology, and employability skills.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Program Structure

This program is a planned sequence of instruction consisting of 65 credit hours.

When developing the course sequence for the local implementation of this program, select courses that:

- Meet the skill development requirements of the standards and benchmarks of this program.
- Meet the general education core course requirements of Rule 6A-14.0303, Florida Administrative Code.
- Where reasonable and practicable, align with programs offered by your institution or other postsecondary institutions in Florida, including:
    - Related CCC and ATD credentials.
    - Baccalaureate degrees within the same career pathway and/or Federal CIP code.

Visit FloridaShines' Discover Programs website to identify other institutions that offer similar programs to review their course sequencing. Where appropriate, course alignment between institutions offering related programs can facilitate interagency student articulation.

Visit FloridaShines' Common Prerequisites Manual to identify courses that are prerequisites for admission into an upper division program. When sub-baccalaureate courses are aligned to the course admissions requirements of baccalaureate programs with the same career pathway, students can enter upper division coursework seamlessly.

Florida's Career Readiness Skills for CTE Programs

Employability Skills	
01.0	Apply academic skills to workplace scenarios.
	01.01 Use reading skills.
	01.02 Use writing skills.
	01.03 Use mathematical strategies and procedures.
	01.04 Use scientific principles and procedures.
02.0	Design a solution to an industry problem.
	02.01 Use critical thinking.
	02.02 Use creativity.
	02.03 Make sound decisions.
	02.04 Solve problems.
	02.05 Reason.
	02.06 Plan and organize.
03.0	Manage resources within an industry project
	03.01 Manage time.
	03.02 Manage money or resources.
	03.03 Manage materials.
	03.04 Manage personnel.
04.0	Oversee the subcomponents, operations and output of a technical or organizational system.
	04.01 Manage systems.
	04.02 Monitor systems.
	04.03 Improve systems.
05.0	Use information for decision making.
	05.01 Locate information.
	05.02 Organize information.
	05.03 Use information.

	05.04 Analyze information.
	05.05 Communicate information.
06.0	Apply relevant technology to workplace scenarios to aid productivity.
	06.01 Use technology.
07.0	Interpret and express interpersonal communication.
	07.01 Communicate verbally.
	07.02 Listen actively.
	07.03 Comprehend written material.
	07.04 Convey information in writing.
	07.05 Communicate nonverbally.
	07.06 Interpret nonverbal communication.
08.0	Interact with others to accomplish workplace goals.
	08.01 Collaborate with others in a team.
	08.02 Respond to customer needs.
	08.03 Exercise leadership.
	08.04 Negotiate to resolve conflict.
	08.05 Respect others.
09.0	Manage personal behavior to maximize productivity and professional growth.
	09.01 Demonstrate responsibility and self-discipline.
	09.02 Adapt and show flexibility.
	09.03 Work independently.
	09.04 Demonstrate a willingness to learn.
	09.05 Demonstrate integrity.
	09.06 Demonstrate professionalism.
	09.07 Take initiative.
	09.08 Display positive attitude.
	09.09 Take responsibility for professional growth.

Job Attainment	
10.0	Find, assess and apply to job opportunities.
10.01	Identify online job posts relevant to his or her career aspirations.
10.02	Compare and contrast the job posts' required qualifications, job duties, compensation, benefits and employers.
10.03	Define what information, documentation and writing prompts are required for the positions.
11.0	Communicate personal competence, character and fit for a job opportunity.
11.01	Develop a resume.
11.02	Write a cover letter.
11.03	Curate a professional portfolio that includes work products.
11.04	Prepare for and experience a mock job interview.
12.0	Cultivate and leverage relationships to professionally advance.
12.01	Request a signed reference letter, letter of recommendation and/or an online skill/professionalism endorsement.
12.02	Develop a plan to cultivate a professional digital footprint.
12.03	Develop a networking plan for a specific industry of interest.

Standards

After successfully completing this program, the student will be able to perform the following:

01.0 Demonstrate knowledge of the healthcare delivery system and health occupations.
02.0 Demonstrate the ability to communicate and use interpersonal skills effectively.
03.0 Demonstrate legal and ethical responsibilities.
04.0 Demonstrate an understanding of and apply wellness and disease concepts.
05.0 Recognize and practice safety and security procedures.
06.0 Recognize and respond to emergency situations.
07.0 Recognize and practice infection control procedures.
08.0 Demonstrate an understanding of information technology applications in healthcare.
09.0 Demonstrate employability skills.
10.0 Demonstrate knowledge of bloodborne diseases, including HIV/AIDS.
11.0 Apply basic math and science skills.
12.0 Demonstrate proper use of medical terminology.
13.0 Demonstrate knowledge of legal and ethical responsibilities for medical assistants.
14.0 Demonstrate an understanding of anatomy and physiology concepts.
15.0 Demonstrate effective front office duties.
16.0 Demonstrate accepted professional, communication, and interpersonal skills as related to phlebotomy.
17.0 Discuss phlebotomy in relation to the healthcare setting.
18.0 Identify the anatomic structure and function of body systems in relation to services performed by the phlebotomist.
19.0 Recognize and identify collection reagents supplies, equipment, and interfering chemical substances.
20.0 Demonstrate skills and knowledge necessary to perform phlebotomy.
21.0 Practice infection control following standard precautions.
22.0 Practice accepted procedures of transporting, accessioning, and processing specimens.
23.0 Practice quality assurance and safety.
24.0 Describe the role of a medical assistant with intravenous therapy.
25.0 Describe the cardiovascular system.
26.0 Identify legal and ethical responsibilities of an electrocardiogram (EKG/ECG) aide.
27.0 Perform correct patient care techniques for EKG/ECG testing.
28.0 Demonstrate knowledge of, apply, and use medical instrumentation modalities when performing EKG/ECG.
29.0 Demonstrate clinical care assistance.
30.0 Demonstrate knowledge of infection control fundamentals.
31.0 Demonstrate knowledge of minor medical treatments.
32.0 Demonstrate knowledge of diagnostic medical procedures.
33.0 Demonstrate basic radiologic procedures.
34.0 Demonstrate knowledge of pharmacological principles and medication administration.
35.0 Demonstrate knowledge of CLIA-waived diagnostic clinical laboratory procedures.
36.0 Demonstrate knowledge of emergency preparedness and protective practices.

37.0 Perform administrative and managerial duties.
38.0 Perform clinical and general skills.
39.0 Display professional work habits essential to medical assisting.
40.0 Demonstrate knowledge regarding the use of Artificial Intelligence (AI) in healthcare.

Florida Department of Education
Student Performance Standards

Program Title: **Medical Assisting Advanced**
CIP Number: **1351080103**
Program Length: **65 credit hours**

Standards 1-11 are referred to as the **Health Science Core** and are required standards in this program. Secondary and Postsecondary students completing the health science core will not have to repeat the core in any other health science program in which it is a part. When the recommended sequence is followed, the structure allows students to complete at specified points for employment or remain for advanced training or cross-training.

To ensure consistency whenever these courses are offered, the health science core standards (1-11) and benchmarks have been placed in a separate document. To access this document, visit this link:
https://www.fldoe.org/core/fileparse.php/20569/urlt/health-sci-core-psav-cc-2324.rtf

At the completion of this program, the student will be able to:	
12.0	Demonstrate proper use of medical terminology. The student will be able to:
12.01	Use medical terminology as appropriate for a medical assistant.
12.02	Identify medical terms, labeling the word parts.
12.03	Define medical terms and abbreviations related to all body systems.
13.0	Demonstrate knowledge of legal and ethical responsibilities for medical assistants. The student will be able to:
13.01	Describe the role of the medical assistant.
13.02	Provide health care as set forth in section 458.3485, Florida Statutes, for the medical assistant.
13.03	Distinguish between the liability of physicians and medical personnel in the medical office.
13.04	Explain the principles for preventing medical liability.
13.05	List the principles in the Codes of Ethics for Medical Assistants as stated by the American Association of Medical Assistants.
14.0	Demonstrate an understanding of anatomy and physiology concepts. The student will be able to:
14.01	Define the terms anatomy and physiology.
14.02	Define both medical terms and abbreviations related to all body systems.

14.03	Define the principal directional terms, planes, quadrants, and cavities used in describing the body and the association of body parts to one another.
14.04	Define the levels of organization of the body from cells to systems.
14.05	Describe the function of the 11 major organ systems of the body (1) integumentary, (2) skeletal, (3) muscular, (4) nervous, (5) endocrine, (6) cardiovascular, (7) lymphatic, (8) respiratory, (9) digestive, (10) urinary, and (11) reproductive.
14.06	Describe symptoms and common disease pathology related to each body system and the relationship of the disease process to other body systems..
14.07	Discuss diagnostic options to identify common disease pathology and treatment options.
14.08	Compare the structure and function of the body across the life span.
15.0	Demonstrate effective front office duties. The student will be able to:
15.01	Utilize effective communication skills essential in the medical office and recognize both verbal and non-verbal cues.
15.02	Operate office equipment.
15.03	Perform clerical office procedures.
15.04	Discuss principles of using electronic medical record (EMR).
15.05	Prepare and maintain medical records both manually and within the EMR.
15.06	Screen and process mail.
15.07	Schedule routine appointments and patient admissions, and/or procedures, both manually and within the EMR.
15.08	Adhere to current government regulations, risk management, and compliance within the scope of practice of a medical assistant practicing in the state of Florida.
15.09	Maintain office inventory.
15.10	Inform patients of office policies.
15.11	Perform general medical office maintenance.
15.12	Perform daily office activities both manually and within the EMR.
15.13	Greet patients and visitors.
15.14	Maintain confidentiality and adhere to Health Insurance Portability and Accountability Act (HIPAA) regulations.
15.15	Demonstrate safety and quality assurance in the workplace.

	15.16 Identify and maintain office security policies and procedures.
16.0	Demonstrate accepted professional, communication, and interpersonal skills as related to phlebotomy. The student will be able to:
	16.01 Demonstrate the appropriate professional behavior of a phlebotomist and describe the scope of practice (job skills and duties).
	16.02 Explain to the patient the procedure to be used in specimen collection.
	16.03 Explain in detail the importance of identifying patients correctly when drawing blood.
	16.04 Explain the importance of continuing education in relation to certification to maintain competency and skills.
17.0	Discuss phlebotomy in relation to the healthcare setting. The student will be able to:
	17.01 List, classify, and discuss various departments and services within the healthcare setting in which the phlebotomist must interact with to obtain laboratory specimens from patients.
	17.02 Identify the major departments/sections within the clinical laboratory, the major types of procedures run in each department/section, and their specimen requirements.
	17.03 Describe roles of the major classifications of clinical laboratory personnel (i.e., pathologist, chief/administrative technologist, CLS, MLS, MLT, MT, phlebotomist, lab assistant, etc.).
18.0	Identify the anatomic structure and function of body systems in relation to services performed by the phlebotomist. The student will be able to:
	18.01 Describe and define major body systems with emphasis on the circulatory system.
	18.02 List and describe the main superficial veins used in performing venipuncture.
	18.03 Locate the most appropriate site(s) for capillary and venipuncture.
	18.04 Describe the function of the following blood components: erythrocytes, thrombocytes, leukocytes, and plasma.
	18.05 Compare and contrast serum and plasma as they relate to blood collection.
	18.06 Discuss hemostasis, hemolysis, and methods of prevention as they relate to blood collection.
19.0	Recognize and identify collection reagents supplies, equipment, and interfering chemical substances. The student will be able to:
	19.01 Identify and discuss the proper use of appropriate types of equipment needed to collect various clinical laboratory blood specimens by venipuncture.
	19.02 Explain the special precautions and types of equipment needed to collect blood from the pediatric patient.
	19.03 Identify and discuss the proper use of supplies used in collecting short-draw specimens or difficult draws.
	19.04 Identify and discuss the proper use of the various types of anticoagulants, preservatives, and gels used in blood collection and the vacuum tube color-codes for these additives.

	19.05 Describe the types of specimens that are analyzed in the clinical laboratory and the phlebotomist's role in collecting and/or transporting these specimens to the laboratory.
	19.06 Describe substances potentially encountered during phlebotomy that can interfere with the analysis of blood constituents.
	19.07 Define and utilize correct medical terminology and metric measurement needed for specimen collection.
20.0	Demonstrate skills and knowledge necessary to perform phlebotomy. The student will be able to:
	20.01 Follow approved procedure for completing a laboratory requisition form and recognize a properly completed form.
	20.02 Demonstrate knowledge of established protocol for patient and specimen identification.
	20.03 Discuss appropriate methods for facilitating and preparing the patient for capillary and venipuncture collection.
	20.04 List appropriate antiseptic agents useful in preparing sites for capillary and venipuncture for adult and pediatric patients.
	20.05 Perform venipuncture by evacuated tube, butterfly, and syringe systems, demonstrating appropriate use of supplies, proper handling of equipment and specimens, and appropriate patient care.
	20.06 Describe the correct order of draw.
	20.07 Describe the use of barcoding systems used for specimen collection.
	20.08 Convey an understanding of capillary puncture using appropriate supplies and techniques for adult and pediatric patients.
	20.09 Describe the most common complications associated with capillary and venipuncture, their causes, prevention, and treatment.
	20.10 Recognize and respond to possible adverse patient reactions such as allergies, convulsions, syncope, lightheadedness, vomiting, and nerve involvement.
	20.11 Perform appropriate procedures for disposing of used or contaminated capillary and venipuncture supplies.
	20.12 Perform appropriate techniques for making a peripheral blood smear for hematologic evaluation.
	20.13 Demonstrate the proper procedure for collecting blood cultures.
	20.14 Demonstrate a working understanding of how the age and weight of patients impact the maximum amount of blood that can be safely drawn.
21.0	Practice infection control following standard precautions. The student will be able to:
	21.01 Define the term “hospital-acquired infection.”
	21.02 Describe and practice procedures for infection prevention, including hand washing skills.
	21.03 Discuss transmission-based precautions.

	21.04 Identify potential routes of infection and their complications.
22.0	Practice accepted procedures of transporting, accessioning, and processing specimens. The student will be able to:
	22.01 Instruct patients in the proper collection of urine (clean catch, mid-stream), sputum, and stool specimens.
	22.02 Follow the approved procedure for preparation and processing (e.g., centrifugation, separation, aliquoting, labeling, and storage) of serum, plasma, urine, sputum, stool, and wound culture specimens.
	22.03 Describe the significance of time constraints for specimen collection, transporting, and delivery.
	22.04 Describe routine procedures for transporting and processing specimens, including DOT packaging requirements
23.0	Practice quality assurance and safety. The student will be able to:
	23.01 Distinguish and perform procedures that ensure the reliability of test results when collecting blood specimens.
	23.02 Practice appropriate patient safety.
	23.03 Practice safety in accordance with OSHA (State & Federal guidelines) for chemical, biological, and PPE established procedures, including proper disposal of sharps and biohazardous materials.
	23.04 Follow documentation procedures for work-related accidents.
	23.05 Implement appropriate Joint Commission patient safety goals and other accrediting/regulatory agency guidelines.
24.0	Describe the role of a medical assistant with intravenous therapy. The student will be able to:
	24.01 Outline the principles of intravenous therapy.
	24.02 Understand intravenous terminology, practices, and equipment.
	24.03 Describe the dangers of intravenous treatment.
	24.04 Recognize the role of a medical assistant in assisting with intravenous therapy.
25.0	Describe the cardiovascular system. The student will be able to:
	25.01 Label the heart and surrounding structures.
	25.02 List the functions of the heart and surrounding structures.
	25.03 Trace the flow of blood through the body.
	25.04 Identify and describe the electrical conduction system.

26.0	Identify legal and ethical responsibilities of an electrocardiogram (EKG/ECG) aide. The student will be able to:
	26.01 Recognize and practice legal and ethical responsibilities as they relate to an EKG/ECG aide.
	26.02 Maintain a safe and efficient work environment.
	26.03 Maintain EKG/ECG equipment so it will be safe and accurate.
27.0	Perform correct patient care techniques for EKG/ECG testing. The student will be able to:
	27.01 Describe the physical preparation of the patient for EKG/ECG testing.
	27.02 Identify the patient and verify the requisition order.
	27.03 Prepare patient for EKG/ECG testing.
	27.04 State precautions required when performing an EKG/ECG.
28.0	Demonstrate knowledge of, apply, and use medical instrumentation modalities when performing EKG/ECG. The student will be able to:
	28.01 Calibrate and maintain EKG/ECG equipment in the work environment.
	28.02 Identify three types of lead systems (limb, augmented, and precordial/chest).
	28.03 State Einthoven's triangle.
	28.04 Demonstrate proper lead placement to include patients with special needs.
	28.05 Demonstrate knowledge of the Holter Monitor and provide patient education.
	28.06 Identify, troubleshoot, and resolve artifacts and mechanical problems.
	28.07 Perform 12-lead EKG/ECG.
	28.08 Recognize normal sinus rhythm.
	28.09 Recognize and report dysrhythmias.
	28.10 Recognize cardiac emergencies as seen on EKG/ECG.
	28.11 Use proper documentation skills to analyze electrocardiographs.
29.0	Demonstrate clinical care assistance. The student will be able to:
	29.01 Prepare patients for and assist the provider with physical examinations in all specialty areas.

	29.02 Measure and record vital signs, recognizing abnormalities and danger signs.
	29.03 Measure and record apical and radial pulses.
	29.04 Measure and record blood pressure.
	29.05 Record patient data.
	29.06 Educate patient on breast and testicular self-examinations.
	29.07 Assist with pediatric procedures.
	29.08 Educate patients regarding healthcare and wellness practices in accordance with their health status.
	29.09 Educate patients utilizing the U.S. Department of Agriculture's "My Plate" Food Guide (https://www.myplate.gov/).
	29.10 Prepare patients for diagnostic procedures.
30.0	Demonstrate knowledge of infection control fundamentals. The student will be able to:
	30.01 Practice standard precautions when performing sanitation, disinfection, and sterilization.
	30.02 Identify common instruments.
	30.03 Perform proper sterilization.
	30.04 Perform proper sanitization.
	30.05 Wrap instruments and supplies for autoclave.
	30.06 Demonstrate proper use of the autoclave.
	30.07 Perform proper disinfection.
	30.08 Demonstrate proper infection control.
	30.09 Demonstrate safety when handling contaminated objects.
	30.10 Create and maintain sterile fields.
	30.11 Demonstrate proper surgical hand washing and gloving.
	30.12 Remove sutures and staples.
	30.13 Dispose contaminated objects in correct receptacles.

31.0	Demonstrate knowledge of minor medical treatments. The student will be able to:
	31.01 Perform minor treatments as directed by the provider.
	31.02 Assist the provider with examination, treatment, and/or minor surgery.
	31.03 Organize examination and treatment areas before, during, and after patient care.
	31.04 Assist with orthopedic procedures.
	31.05 Demonstrate the knowledge of casting procedures and supplies.
	31.06 Apply correctly all types of roller bandages.
	31.07 Perform eye irrigations and instillations.
	31.08 Perform ear irrigations and instillations.
32.0	Demonstrate knowledge of diagnostic medical procedures. The student will be able to:
	32.01 Perform visual and auditory screening.
	32.02 Perform spirometry.
	32.03 Perform oximetry.
	32.04 Assist providers in the performance of Papanicolaou (Pap smear) and gynecologic exams.
33.0	Demonstrate basic radiologic procedures. The student will be able to:
	33.01 Describe the operation of radiologic equipment and the use of accessories.
	33.02 Describe how to preserve X-ray film files.
	33.03 Describe types of radiography systems.
	33.04 Educate patients for the preparation of non-contrast radiological exams.
	33.05 Demonstrate knowledge of other diagnostic imaging procedures.
34.0	Demonstrate knowledge of pharmacological principles and medication administration. The student will be able to:
	34.01 Identify commonly administered drugs, their uses, and effects.
	34.02 Identify major drug categories, drug names, and their actions.

	34.03 Use correct pharmaceutical abbreviations in accordance with the Joint Commission.
	34.04 Identify parenteral and non-parenteral drug administration.
	34.05 Educate patients regarding self-administration of medications.
	34.06 Execute dosage calculations accurately.
	34.07 Demonstrate knowledge of legal and ethical standards related to drug dispensing and administration under provider supervision.
	34.08 Demonstrate knowledge of drugs used in emergencies and first aid.
	34.09 Identify the general rules for drug administration.
	34.10 Recognize and report medication errors.
	34.11 Demonstrate appropriate techniques to prepare and administer parenteral (excluding IV) and non-parenteral medications.
35.0	Demonstrate knowledge of CLIA-waived diagnostic clinical laboratory procedures. The students will be able to:
	35.01 Comply with safety signs, symbols, and labels.
	35.02 Recognize signs and symptoms that may indicate to the physician a need for laboratory testing.
	35.03 Describe the criteria used by the Food and Drug Administration (FDA) to classify a test as “CLIA waived” and the regulatory constraints on test performance.
	35.04 Explain the methods of quality control for CLIA-waived testing, identify acceptable and unacceptable control results, and describe specific corrective action required when results are unacceptable.
	35.05 Demonstrate proper technique for the collection of urine, capillary whole blood (finger/heel stick), culture material (throat/nasal swab and wound cultures), and other specimen types required for CLIA-waived tests.
	35.06 Instruct patients in the proper collection of urine (clean catch, mid-stream), sputum, and stool specimens.
	35.07 Perform CLIA-waived occult blood tests.
	35.08 Perform CLIA-waived urinalysis testing, including color and turbidity assessment and reagent test strips.
	35.09 Perform CLIA-waived hematology tests (e.g., hemoglobin, hematocrit).
	35.10 Perform CLIA-waived chemistry tests (e.g., glucose, cholesterol)
	35.11 Perform CLIA-waived pregnancy tests.
	35.12 Perform CLIA-waived infectious disease testing (e.g., strep screen, mono test, influenza A/B, and COVID).

36.0	Demonstrate knowledge of emergency preparedness and protective practices. The student will be able to:
36.01	Maintain and operate emergency equipment and supplies.
36.02	Participate in a mock environmental exposure event and document steps taken.
36.03	Explain an evacuation plan for a medical office.
36.04	Maintain a current list of community resources for emergency preparedness.
37.0	Perform administrative and managerial duties. The student will be able to:
37.01	Execute data management using Electronic Medical Record (EMR), including, but not limited to, patient registration, appointment scheduling, charting, billing and insurance processing, procedure and diagnostic coding, ordering and monitoring patient testing, medication and prescription orders, keyboarding and correspondence, and performing an office inventory.
37.02	Execute non-EMR data management, including, but not limited to, selecting appropriate procedure and diagnostic codes, processing insurance data and claims, and developing and maintaining billing and collection systems.
37.03	Perform various financial procedures, including, but not limited to, billing and collection procedures, payroll procedures, and checkbook procedures.
37.04	Demonstrate knowledge of management in a medical office, including but not limited to personnel records, interviewing, various management styles, risk management, and conflict resolution.
38.0	Perform clinical and general skills. The student will be able to:
38.01	Demonstrate aseptic hand washing technique.
38.02	Dispose of bio-hazardous waste in appropriate containers.
38.03	Adhere to sterilization techniques according to standards.
38.04	Prepare patients for examinations and/or minor office procedures and collect their vital signs and medical histories.
38.05	Prepare and maintain examination and treatment area(s).
38.06	Assist with examinations and/or minor office procedures.
38.07	Provide and document patient education.
38.08	Accurately record and report laboratory tests.
39.0	Display professional work habits essential to medical assisting. The student will be able to:
39.01	Communicate appropriately in healthcare settings by listening, writing, speaking, and presenting with a professional demeanor.
39.02	Collaborate, communicate, and interact professionally with other healthcare professionals.

	39.03 Contribute actively and appropriately as a team member.
	39.04 Consider and be respectful of cultural differences in the medical field.
	39.05 Exercise proper judgment and critical thinking skills in decision making.
	39.06 Adapt to changes in work environments with flexibility.
	39.07 Model professional work habits.
	39.08 Complete tasks using effective time management skills.
	39.09 Respond appropriately and quickly to a patient's needs and concerns.
	39.10 Practice etiquette and social sensitivity in face-to-face interaction, on the telephone, and on the internet.
	39.11 Identify resources related to patients' healthcare needs.
40.0	Demonstrate knowledge regarding the use of Artificial Intelligence (AI) in healthcare. The student will be able to:
	40.01 Explain the fundamentals of AI and its use in medical assisting.
	40.02 Identify healthcare sectors benefiting from AI.
	40.03 Demonstrate the use of AI tools in medical assisting.
	40.04 Identify AI's role in patient privacy, data protection, and ethical concerns.
	40.05 Demonstrate knowledge of interpreting AI outputs in patient management systems.

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools, and equipment, as well as experimental, quality, and safety procedures, are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate, and troubleshoot equipment/tools used to make observations. Students understand measurement error and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

Special Notes

Although it is not required, it is strongly recommended that the programs meet the Standards and Guidelines of an Accredited Educational Program for the Medical Assistant adopted by the American Association of Medical Assistants and the Commission on Accreditation of Allied Health Education Programs (CAAHEP) or the American Medical Technologist and the Accrediting Bureau of Health Education Schools (ABHES).
For further information, contact:

Commission on Accreditation of Allied Health Education Programs (CAAHEP) www.caahep.org/
1361 Park Street, Clearwater, FL 33756
Phone: 727-210-2350/ Fax: 727-210-2354

Accrediting Bureau of Health Education Schools (ABHES) www.abhes.org/
777 Leesburg Pike, Suite 312, North Falls, VA 22043
(703) 917-9503

This program will also be in accordance with Florida Statute for Medical Assistants, 458.3485, F.S.

This program meets the Department of Health's education requirements for HIV/AIDS, Domestic Violence, and Prevention of Medical Errors. Although not a requirement for initial licensure, it is a requirement for renewal, therefore, the instructor **may** provide a certificate for renewal purposes to the student verifying these requirements have been met.

If students in this program are seeking a licensure, certificate, or registration through the Department of Health, please refer to 456.0635, F.S. for more information on disqualification for a license, certificate, or registration through the Department of Health.

Program completers of a CAAHEP or ABHES-accredited program are eligible to take the American Association of Medical Assistants' Certification Examination (CMA) or the American Medical Technologists' Certification Examination (RMA). For further information, contact:

American Association of Medical Assistants (AAMA) www.aama-ntl.org/
20 North Wacker Drive, Suite 1575, Chicago, Illinois 60606, (312) 899-1500
Or

American Medical Technologist (AMT) https://americanmedtech.org/
10700 West Higgins Road, Suite 150, Rosemont, Illinois 60018, (800) 275-1268

The Core should be taken first in the program. Following the successful completion of the core, the student is eligible to take the National Health Care Foundation Skill Standards Assessment with instructor approval and the completion of a portfolio.

General Education Course Requirements for AS and AAS Degrees

State Board of Education Rule 6A-14.030(4), F.A.C., identifies 15 credit hours as the minimum amount of general education coursework required in the Associate of Science (AS) degree and the Associate of Applied Science (AAS) degree. In addition, Rule 6A-14.0303, F.A.C., implements s. 1007.25, F.S., and requires students entering a technical education degree program in the 2022-2023 academic year, and thereafter, to complete at least one identified core course in each subject area as part of the general education course requirements (15 credit hours total) before a degree is awarded. The core subject areas include:

- Communication.
- Humanities.
- Mathematics.
- Natural Sciences.
- Social Sciences.

Career and Technical Student Organization (CTSO)

CTSOs are co-curricular career and technical student organizations providing leadership training and reinforcing specific career and technical skills. Career and Technical Student Organizations provide activities for students as an integral part of the instruction offered. Other CTSOs not listed in this curriculum framework or recognized by the Florida Department of Education are permissible provided they support student mastery over the standards and benchmarks of this curriculum framework.

Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology, and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

Certificate Programs

A College Credit Certificate consists of a program of instruction of less than sixty (60) credits of college-level courses, which is part of an AS or AAS degree program and prepares students for entry into employment (Rule 6A-14.030, F.A.C.). This AS degree program includes the following College Credit Certificates:

Medical Assisting Specialist (0351080104) – 44 credit hours
Healthcare Support Specialist (0351081401) – 21 credit hours

Standards for the above certificate programs are contained in separate curriculum frameworks.

Florida Department of Education
Curriculum Framework

The standards and benchmarks for this program were updated for the 2026-27 academic year.

Program Title: **Occupational Therapy Assistant**
Career Cluster: **Health Science**

Associate in Science	
CIP Number	1351080303
Program Type	College Credit
Program Length	74 credit hours
CTSO	HOSA
SOC Codes (all applicable)	For program SOC codes, please see the Program and Course Tables section of the CTE Program Resources page linked below.
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml

Purpose

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Health Science career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of Health Science career cluster.

The purpose of this program is to prepare students for employment as occupational therapy assistants or to provide supplemental training for persons previously or currently employed in this occupation. The program has been developed to prepare graduates as entry-level generalists and to offer a broad exposure to delivery model systems through academic and fieldwork education including preparation to assist an occupational therapist in implementing the plan of therapy for a patient prescribed by a physician.

The content includes but is not limited to communication and interpersonal skills, health-illness-health concepts, specific life tasks and skills, the study and application of occupational therapy principles, cultural competencies, professional behaviors, and employability skills, health and safety including CPR, anatomy and physiology, kinesiology, psychology, sociology, and gerontology.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Program Structure

This program is a planned sequence of instruction consisting of 74 credit hours.
When developing the course sequence for the local implementation of this program, select courses that:

- Meet the skill development requirements of the standards and benchmarks of this program.
- Meet the general education core course requirements of Rule 6A-14.0303, Florida Administrative Code.
- Where reasonable and practicable, align with programs offered by your institution or other postsecondary institutions in Florida, including:
    - Related CCC and ATD credentials.
    - Baccalaureate degrees within the same career pathway and/or Federal CIP code.

Visit FloridaShines' Discover Programs website to identify other institutions that offer similar programs to review their course sequencing. Where appropriate, course alignment between institutions offering related programs can facilitate interagency student articulation.

Visit FloridaShines' Common Prerequisites Manual to identify courses that are prerequisites for admission into an upper division program. When sub-baccalaureate courses are aligned to the course admissions requirements of baccalaureate programs with the same career pathway, students can enter upper division coursework seamlessly.

Regulated Programs

The program should meet the guidelines of the Accreditation Council for Occupational Therapy Education (ACOTE), 4720 Montgomery Lane Suite 200, Bethesda, MD 20814-3449, (301) 352-2682, of the American Occupational Therapy Association so that students who complete the program will be eligible to take the national certification examination administered by the National Board for Certification in Occupational Therapy (NBCOT). Florida requires licensing of graduates by the Florida Department of Health through the Florida Board of Occupational Therapy Practice for persons completing programs approved by the American Occupational Therapy Association. This program must be in accordance with the Florida Department of Health's Occupational Therapy Board, Chapter 468, Part III, F.S. and Rule Chapter 64B11, F.A.C.

This program meets the Department of Health's education requirements for HIV/AIDS, Domestic Violence and Prevention of Medical Errors. Although not a requirement for initial licensure, it is a requirement for renewal, therefore the instructor **may** provide a certificate for renewal purposes to the student verifying these requirements have been met.

If students in this program are seeking a licensure, certificate or registration through the Department of Health, please refer to 456.0635, F.S. for more information on disqualification for a license, certificate, or registration through the Department of Health.

Florida's Career Readiness Skills for CTE Programs

Employability Skills	
01.0	Apply academic skills to workplace scenarios.
01.01	Use reading skills.
01.02	Use writing skills.
01.03	Use mathematical strategies and procedures.
01.04	Use scientific principles and procedures.
02.0	Design a solution to an industry problem.
02.01	Use critical thinking.
02.02	Use creativity.
02.03	Make sound decisions.
02.04	Solve problems.
02.05	Reason.
02.06	Plan and organize.
03.0	Manage resources within an industry project
03.01	Manage time.
03.02	Manage money or resources.
03.03	Manage materials.
03.04	Manage personnel.
04.0	Oversee the subcomponents, operations and output of a technical or organizational system.
04.01	Manage systems.
04.02	Monitor systems.
04.03	Improve systems.
05.0	Use information for decision making.
05.01	Locate information.
05.02	Organize information.
05.03	Use information.

	05.04 Analyze information.
	05.05 Communicate information.
06.0	Apply relevant technology to workplace scenarios to aid productivity.
	06.01 Use technology.
07.0	Interpret and express interpersonal communication.
	07.01 Communicate verbally.
	07.02 Listen actively.
	07.03 Comprehend written material.
	07.04 Convey information in writing.
	07.05 Communicate nonverbally.
	07.06 Interpret nonverbal communication.
08.0	Interact with others to accomplish workplace goals.
	08.01 Collaborate with others in a team.
	08.02 Respond to customer needs.
	08.03 Exercise leadership.
	08.04 Negotiate to resolve conflict.
	08.05 Respect others.
09.0	Manage personal behavior to maximize productivity and professional growth.
	09.01 Demonstrate responsibility and self-discipline.
	09.02 Adapt and show flexibility.
	09.03 Work independently.
	09.04 Demonstrate a willingness to learn.
	09.05 Demonstrate integrity.
	09.06 Demonstrate professionalism.
	09.07 Take initiative.
	09.08 Display positive attitude.
	09.09 Take responsibility for professional growth.

Job Attainment	
10.0	Find, assess and apply to job opportunities.
10.01	Identify online job posts relevant to his or her career aspirations.
10.02	Compare and contrast the job posts' required qualifications, job duties, compensation, benefits and employers.
10.03	Define what information, documentation and writing prompts are required for the positions.
11.0	Communicate personal competence, character and fit for a job opportunity.
11.01	Develop a resume.
11.02	Write a cover letter.
11.03	Curate a professional portfolio that includes work products.
11.04	Prepare for and experience a mock job interview.
12.0	Cultivate and leverage relationships to professionally advance.
12.01	Request a signed reference letter, letter of recommendation and/or an online skill/professionalism endorsement.
12.02	Develop a plan to cultivate a professional digital footprint.
12.03	Develop a networking plan for a specific industry of interest.

Standards

After successfully completing this program, the student will be able to perform the following:

01.0 Demonstrate knowledge of the healthcare delivery system and health occupations.
02.0 Demonstrate the ability to communicate and use interpersonal skills effectively.
03.0 Demonstrate legal and ethical responsibilities.
04.0 Demonstrate an understanding of and apply wellness and disease concepts.
05.0 Recognize and practice safety and security procedures.
06.0 Recognize and respond to emergency situations.
07.0 Recognize and practice infection control procedures.
08.0 Demonstrate an understanding of information technology applications in healthcare.
09.0 Demonstrate employability skills.
10.0 Demonstrate knowledge of blood borne diseases, including HIV/AIDS.
11.0 Apply basic math and science skills.
12.0 Demonstrate ability to communicate and use interpersonal skills effectively for the occupation.
13.0 Demonstrate an understanding of and apply health-illness-health concepts.
14.0 Analyze and apply learned skills in occupations and activities.
15.0 Apply occupational therapy assistant role in the OT service delivery process.
16.0 Demonstrate knowledge of ethics and safety related to occupational therapy assistants.
17.0 Demonstrate knowledge of client mobility.
18.0 Demonstrate an understanding of stress/ stressors and stress reactions as well as mediating factors and its influence on health and human functioning.
19.0 Explain the role of the OTA in the management of occupational therapy services.
20.0 Provide client, family and caregiver education and training.

Florida Department of Education
Student Performance Standards

Program Title: **Occupational Therapy Assistant**
CIP Number: **1351080303**
Program Length: **74 credit hours**

Standards 1-11 are referred to as the **Health Science Core** and are required standards in this program. Secondary and Postsecondary students completing the health science core will not have to repeat the core in any other health science program in which it is a part. When the recommended sequence is followed, the structure allows students to complete at specified points for employment or remain for advanced training or cross-training.

To ensure consistency whenever these courses are offered, the health science core standards (1-11) and benchmarks have been placed in a separate document. To access this document, visit this link:
https://www.fldoe.org/core/fileparse.php/20569/urlt/health-sci-core-psav-cc-2324.rtf

At the completion of this program, the student will be able to:	
12.0	Demonstrate ability to communicate and use interpersonal skills effectively for the occupation. The student will be able to:
12.01	Demonstrate understanding of "therapeutic use of self" in relationship to working with the client and other allied health professionals.
12.02	Develop and conduct therapeutic didactic and group discussions.
12.03	Record/report clinically relevant observations.
12.04	Demonstrate the ability to contribute to and participate in interdisciplinary and multidisciplinary team meetings using a client-centered, evidence-based approach participating in interdisciplinary and multidisciplinary group meetings.
12.05	Accurately document the provision of OT services in accordance with third party payer requirements.
12.06	Articulate the importance of applies statistics, tests and measurements for the purpose of delivering evidence-based practice.
12.07	Use sound judgement maintaining professionalism when communicating with the client, family, significant others and providers using effective written, oral and nonverbal communication. Models socially appropriate behaviors.
13.0	Demonstrate an understanding of and apply health-illness-health concepts. The student will be able to:
13.01	Explain occupation as a health determinant.
13.02	Describe the basic function of the human body with particular emphasis on the neurological, sensory, musculoskeletal and cardiopulmonary systems.
13.03	Describe the basic development of personality and learning.

	13.04 Describe human occupation across the lifespan as related to the developmental process from birth to death.
	13.05 Identify and describe disabling conditions commonly referred to occupational therapy.
	13.06 Demonstrate how the use of occupations supports positive health outcomes and influences health and well-being throughout the lifespan.
	13.07 Explain the role of the occupational therapist and occupational therapy assistant in the assessment and intervention process identifying the collaborative roles and rationale for supervision.
	13.08 Apply the concepts of occupational therapy to a variety of service delivery models and systems where OT is both currently practiced and emerging.
	13.09 Analyze how theory, political climate, history, culture, socioeconomics and demographics influence practice and engagement in activities across the lifespan.
	13.10 Demonstrate sound judgment in regard to safety of self and others and adhere to safety regulations throughout the occupational therapy practice.
	13.11 Demonstrate the ability to assess and monitor vital sign to ensure that the client is stable for intervention.
14.0	Analyze and apply learned skills in occupations and activities. The student will be able to:
	14.01 Demonstrate skill in analyzing, developing and implementing intervention strategies utilizing occupations and activities.
	14.02 Demonstrate skill in instructing and adapting occupations and activities.
	14.03 Demonstrate the ability to analyze occupations and activities to implement the intervention plan.
	14.04 Grade and adapt activities and occupations to promote independent performance.
	14.05 Demonstrate proper care and maintenance of equipment and supplies used in occupational therapy.
	14.06 Demonstrate an understanding of the use of technology and adaptive equipment to support performance, participation, health and well-being.
	14.07 Demonstrate understanding and apply principles of environmental adaptations addressing ergonomics in school, home and work environments.
15.0	Apply occupational therapy assistant role in the OT service delivery process. The student will be able to:
	15.01 Contribute to initial screening to determine the need for OT services, including data collection for clients' occupational profiles.
	15.02 Contribute to evaluation of occupations, client factors, performance skills, performance patterns, contexts/environments and activity demands, and implement assessments delegated by OT.
	15.03 Contribute to development of occupation-based intervention plans and strategies based on client needs and priorities and occupational therapy goals, in collaboration with OT and client.
	15.04 Implement occupational therapy interventions selected to promote, establish, restore, maintain, modify, or prevent deterioration in occupational performance.

15.05	Contribute to implementation of occupational therapy intervention for development, remediation and restoration of client factors and performance skills (physical, cognitive, perceptual, neuromuscular, behavioral skills and sensory functions).
15.06	Implement occupational therapy intervention through the use of therapeutic occupations and activities, preparatory methods and tasks, education and training, advocacy, and group interventions.
15.07	Contribute to the ongoing review and modification of occupational therapy interventions, and compare progress toward established outcomes.
15.08	Implement outcome measurements and participate in the discharge planning process including client discharge resources. Recommend appropriate levels of care needed for safe discharge based on the discharge destination. Provide needed client discharge resources.
15.09	Complete timely documentation along each step of the service delivery process which communicates the need and rationale for occupational therapy services and meets standards for accountability and reimbursement.
15.10	Implement patient safety goals according to appropriate accrediting and regulatory agency guidelines.
16.0	Demonstrate knowledge of ethics and safety related to occupational therapy assistants. The student will be able to:
16.01	Describe the relationship of the occupational therapy assistant to: • Physician • The occupational therapist • The employer • Other allied health personnel
16.02	Explain the term "risk management".
16.03	Describe to client current treatment objectives and techniques with the client prior to initiation of treatment or service.
16.04	Describe the principles of ethics as outlined in the AOTA Code of Ethics.
16.05	Adhere to safety regulations throughout the occupational therapy process as appropriate to the setting and scope of practice.
16.06	Explain the process of applying and maintaining a Florida license and national certification.
16.07	Identify requirements to obtain and maintain the Florida license including disqualifying felonies.
16.08	Assumes the responsibility for professional growth and development.
17.0	Demonstrate knowledge of client mobility. The student will be able to:
17.01	Transfer client safely and correctly using proper body mechanics from any surface to another such as (i.e., bedside commode, wheelchair, toilet, chair or car.
17.02	Identify wheelchair parts and demonstrate proper wheelchair management in various environments.
17.03	Provide information to client as needed.

	17.04 Demonstrate the understanding of the use of other assistive devices utilized for mobility of clients, i.e., walker, cane, crutches, gait belt, mechanical lifts.
18.0	Demonstrate an understanding of stress/ stressors and stress reactions as well as mediating factors and its influence on health and human functioning. The student will be able to:
	18.01 Evaluate psychological stressors and their positive and negative effect on physical and mental health.
	18.02 Understand the relationship between stress and psychological disorders.
	18.03 Understand stress mediators including perception of stressors, predictability and control of stress, physical and psychological effects and coping resources and methods.
	18.04 Promote health of the client by utilizing meaningful occupation-based treatments health belief models, self-efficacy and coping strategies.
19.0	Explain the role of the OTA in the management of occupational therapy services. The student will be able to:
	19.01 Perform program administration and support responsibilities.
	19.02 Function in the role of supervisee and assist with supervision of aides and volunteers and fieldwork students.
	19.03 Describe the impact of federal and state legislation and practice acts on the practice of occupational therapy.
	19.04 Demonstrate knowledge of various reimbursement systems and documentation requirements.
	19.05 Describe the ongoing professional responsibility for providing fieldwork education and the criteria for becoming a fieldwork educator.
	19.06 Demonstrate the ability to participate in the development, marketing and management of service delivery options.
	19.07 Cooperate, collaborate and communicate to integrate care and ensure care is continuous and reliable as part of an interdisciplinary team.
	19.08 Employ evidenced based practice: integrate research, clinical expertise and patient values for optimal care.
	19.09 Participate in learning and research activities.
	19.10 Explain the role of the practitioner to advocate for changes in service delivery policies, effect changes in the system, recognize opportunities for emerging practice areas, and advocate for opportunities to expand the Occupational Therapy Assistant's role.
20.0	Provide client, family and caregiver education and training. The student will be able to:
	20.01 Identify resources necessary for clients, family and caregivers for the discharge planning process.
	20.02 Educate the client, family and caregivers on the community resources available and their importance.
	20.03 Educate the client, family and caregiver on the referral process.
	20.04 Provide client, family and caregivers with comprehensive discharge resources.

20.05	Educate client, family and caregivers on home programs.
20.06	Provide training in Activities of Daily Living (ADL) in and out of the home utilizing adapted methods and teaching strategies.
20.07	Provide training in Instrumental Activities of Daily Living (I-ADL) in and out of the home utilizing adapted methods and teaching strategies.
20.08	Provide training for safe bed positioning and functional transfers in the living environment according to the diagnosis of the client and their limitations.
20.09	Utilize the concept of health literacy while educating clients in order to facilitate skills in areas of occupation as well as prevention, health maintenance, health promotion and safety.

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as, experimental, quality, and safety procedures are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate and troubleshoot equipment/tools used to make observations. Students understand measurement error; and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

Special Notes

This program focuses on broad, transferable skills and stresses understanding and demonstration of the following elements of the health care industry; planning, management, finance, technical and production skills, underlying principles of technology, labor issues, community issues and health, safety, and environmental issues.

Cooperative training - OJT is appropriate for this program. Whenever cooperative training is offered, the following are required for each student: a training plan, signed by the student, teacher, and the employer, which includes instructional objectives and a list of on-the-job and in-school learning experiences; a workstation which reflects equipment, skills and tasks which are relevant to the occupation which the student has chosen as a career goal. The student must receive compensation for work performed.

The CORE must be taken first in the program. Following the successful completion of the core, the student is eligible to take the National Health Care Foundation Skill Standards Assessment with instructor approval and the completion of a portfolio.

General Education Course Requirements for AS and AAS Degrees

State Board of Education Rule 6A-14.030(4), F.A.C., identifies 15 credit hours as the minimum amount of general education coursework required in the Associate of Science (AS) degree and the Associate of Applied Science (AAS) degree. In addition, Rule 6A-14.0303, F.A.C., implements s. 1007.25, F.S., and requires students entering a technical education degree program in the 2022-2023 academic year, and thereafter, to complete at least one identified core course in each subject area as part of the general education course requirements (15 credit hours total) before a degree is awarded) The core subject areas include:

- Communication.
- Humanities.
- Mathematics.
- Natural Sciences.
- Social Sciences.

Career and Technical Student Organization (CTSO)

CTSOs are co-curricular career and technical student organizations providing leadership training and reinforcing specific career and technical skills. Career and Technical Student Organizations provide activities for students as an integral part of the instruction offered. Other CTSOs not listed in this curriculum framework or recognized by the Florida Department of Education are permissible provided they support student mastery over the standards and benchmarks of this curriculum framework.

Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

Florida Department of Education
Curriculum Framework

The standards and benchmarks for this program were updated for the 2026-27 academic year.

Program Title: **Pharmacy Management**
Career Cluster: **Health Science**

Associate in Science	
CIP Number	1351080502
Program Type	College Credit
Program Length	70 credit hours
CTSO	HOSA
SOC Codes (all applicable)	For program SOC codes, please see the Program and Course Tables section of the CTE Program Resources page linked below.
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml

Purpose

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Health Science career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of Health Science career cluster.

The program is designed to prepare students for employment as a Senior/Lead Pharmacy Technician, Pharmacy Technician Coordinator, Pharmacy Manager/Supervisor trainee, drugstore/pharmacy managers, purchasing managers (First line supervisors/Manager of Retail sales worker), or to provide supplemental training for persons previously or currently employed in these occupations.

This program focuses on broad, transferable skills and stresses understanding and demonstration of the following elements of the health care industry; planning, management, finance, technical and production skills, underlying principles of technology, labor issues, community issues, and health, safety, and environmental issues.

The content includes but is not limited to metric system, medical terminology, medicinal drugs, pharmaceutical compounding, USP 795 standards, sterile techniques, USP 797 and USP 800 standards, maintenance of inventory, IV preparation, receiving and handling of hazardous materials, preparing purchase orders, receiving and checking supplies purchased, printing labels, typing prescription labels, delivering medications, pricing

prescription drug orders and supplies, prepackaging unit dose packages, patient record systems, control records, data processing automation in pharmacy, computer application, employability skills, leadership and human relations skills, health and safety, including CPR.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Program Structure

This program is a planned sequence of instruction consisting of 70 credit hours.

When developing the course sequence for the local implementation of this program, select courses that:

- Meet the skill development requirements of the standards and benchmarks of this program.
- Meet the general education core course requirements of Rule 6A-14.0303, Florida Administrative Code.
- Where reasonable and practicable, align with programs offered by your institution or other postsecondary institutions in Florida, including:
    - Related CCC and ATD credentials.
    - Baccalaureate degrees within the same career pathway and/or Federal CIP code.

Visit FloridaShines' Discover Programs website to identify other institutions that offer similar programs to review their course sequencing. Where appropriate, course alignment between institutions offering related programs can facilitate interagency student articulation.

Visit FloridaShines' Common Prerequisites Manual to identify courses that are prerequisites for admission into an upper division program. When sub-baccalaureate courses are aligned to the course admissions requirements of baccalaureate programs with the same career pathway, students can enter upper division coursework seamlessly.

Regulated Programs

This program is regulated by the Department of Health, Florida Board of Pharmacy.

This program must be approved by the Florida Board of Pharmacy. Program completers who wish to work as Pharmacy Technicians in the State of Florida must register with the Board of Pharmacy (465.014, F.S.).

Florida's Career Readiness Skills for CTE Programs

Employability Skills	
01.0	Apply academic skills to workplace scenarios.
01.01	Use reading skills.
01.02	Use writing skills.
01.03	Use mathematical strategies and procedures.
01.04	Use scientific principles and procedures.
02.0	Design a solution to an industry problem.
02.01	Use critical thinking.
02.02	Use creativity.
02.03	Make sound decisions.
02.04	Solve problems.
02.05	Reason.
02.06	Plan and organize.
03.0	Manage resources within an industry project
03.01	Manage time.
03.02	Manage money or resources.
03.03	Manage materials.
03.04	Manage personnel.
04.0	Oversee the subcomponents, operations and output of a technical or organizational system.
04.01	Manage systems.
04.02	Monitor systems.
04.03	Improve systems.
05.0	Use information for decision making.
05.01	Locate information.
05.02	Organize information.
05.03	Use information.

	05.04 Analyze information.
	05.05 Communicate information.
06.0	Apply relevant technology to workplace scenarios to aid productivity.
	06.01 Use technology.
07.0	Interpret and express interpersonal communication.
	07.01 Communicate verbally.
	07.02 Listen actively.
	07.03 Comprehend written material.
	07.04 Convey information in writing.
	07.05 Communicate nonverbally.
	07.06 Interpret nonverbal communication.
08.0	Interact with others to accomplish workplace goals.
	08.01 Collaborate with others in a team.
	08.02 Respond to customer needs.
	08.03 Exercise leadership.
	08.04 Negotiate to resolve conflict.
	08.05 Respect others.
09.0	Manage personal behavior to maximize productivity and professional growth.
	09.01 Demonstrate responsibility and self-discipline.
	09.02 Adapt and show flexibility.
	09.03 Work independently.
	09.04 Demonstrate a willingness to learn.
	09.05 Demonstrate integrity.
	09.06 Demonstrate professionalism.
	09.07 Take initiative.
	09.08 Display positive attitude.
	09.09 Take responsibility for professional growth.

Job Attainment	
10.0	Find, assess and apply to job opportunities.
10.01	Identify online job posts relevant to his or her career aspirations.
10.02	Compare and contrast the job posts' required qualifications, job duties, compensation, benefits and employers.
10.03	Define what information, documentation and writing prompts are required for the positions.
11.0	Communicate personal competence, character and fit for a job opportunity.
11.01	Develop a resume.
11.02	Write a cover letter.
11.03	Curate a professional portfolio that includes work products.
11.04	Prepare for and experience a mock job interview.
12.0	Cultivate and leverage relationships to professionally advance.
12.01	Request a signed reference letter, letter of recommendation and/or an online skill/professionalism endorsement.
12.02	Develop a plan to cultivate a professional digital footprint.
12.03	Develop a networking plan for a specific industry of interest.

Standards

After successfully completing this program, the student will be able to perform the following:

01.0 Demonstrate knowledge of the healthcare delivery system and health occupations.
02.0 Demonstrate the ability to communicate and use interpersonal skills effectively.
03.0 Demonstrate legal and ethical responsibilities.
04.0 Demonstrate an understanding of and apply wellness and disease concepts.
05.0 Recognize and practice safety and security procedures.
06.0 Recognize and respond to emergency situations.
07.0 Recognize and practice infection control procedures.
08.0 Demonstrate an understanding of information technology applications in healthcare.
09.0 Demonstrate employability skills.
10.0 Demonstrate knowledge of blood-borne diseases, including HIV/AIDS.
11.0 Apply basic math and science skills.
12.0 Practice professional pharmacy relational skills.
13.0 Identify medical and legal considerations in various pharmacy settings.
14.0 Perform clerical duties as related to Pharmacy Practice.
15.0 Demonstrate knowledge of medication safety and prevention of medication errors.
16.0 Demonstrate knowledge of inventory management.
17.0 Initiate measurement and calculating techniques as they relate to United States Pharmacopeia (USP) 795 (non-sterile) compounding in pharmacy practice.
18.0 Demonstrate basic knowledge and skills in areas of anatomy/ physiology, pharmacology, and drug classification relevant to pharmacy technicians.
19.0 Prepare and deliver medications.
20.0 Repackage unit-dose medications.
21.0 Prepare United States Pharmacopeia (USP) 797 and USP 800 sterile products.
22.0 Recognize consumer economic activities.
23.0 Perform decision-making activities.
24.0 Demonstrate leadership skills.
25.0 Identify, classify, and demonstrate management activities.

Florida Department of Education
Student Performance Standards

Program Title: **Pharmacy Management**
CIP Number: **1351080502**
Program Length: **70 credit hours**

Standards 1-11 are referred to as the **Health Science Core** and are required standards in this program. Secondary and Postsecondary students completing the health science core will not have to repeat the core in any other health science program in which it is a part. When the recommended sequence is followed, the structure allows students to complete at specified points for employment or remain for advanced training or cross-training.

To ensure consistency whenever these courses are offered, the health science core standards (1-11) and benchmarks have been placed in a separate document. To access this document, visit this link:
https://www.fldoe.org/core/fileparse.php/20569/urlt/health-sci-core-psav-cc-2324.rtf

At the completion of this program, the student will be able to:	
Pharmacy Technician	
12.0	Practice professional pharmacy relational skills. The student will be able to:
12.01	Explore the meaning, organizational flow, and duties of pharmacy personnel.
12.02	Identify pharmacy organizations and their role in the profession to include student membership opportunities.
12.03	Identify the current trends and perspectives in the pharmacy practice.
12.04	Describe how team building can facilitate change within the pharmacy working environment.
12.05	Understand the importance of good interpersonal skills/soft skills in various pharmacy settings.
12.06	Explain ethical conduct in job-related activities.
12.07	Identify State of Florida requirements for obtaining and maintaining pharmacy technician registration as well as continuing education requirements for renewal.
12.08	Explore the importance of national certification and the continuing education requirements for renewal.
13.0	Identify medical and legal considerations in various pharmacy settings. The student will be able to:
13.01	Articulate the significance of current national and Florida law, medical legal concepts, and administrative rules as they relate to the scope of practice for the pharmacy technician.

13.02	Demonstrate an understanding of current vaccines and their guidelines.
13.03	Convey an understanding of patient counseling requirements pertaining to OBRA-90 versus Medication Therapy Management (MTM).
13.04	Explain the legal requirements for accurate pharmacy documentation and recordkeeping.
13.05	Demonstrate an understanding of HIPAA in pharmacy practice pertaining to the ethical and legal considerations.
13.06	Convey an understanding of pertinent laws governing pharmacy practice, including but not limited to prescriptions, drug diversion, and use of E-FORCSE PDMP requirements.
13.07	Differentiate between controlled substance schedules (CI-CV) and their applicable regulations.
13.08	Convey an understanding of the Florida Right to Know Act with respect to P-listed drugs in addition to hazardous materials, the utilization of safety data sheets, and hazardous communication symbols.
13.09	Understand and explain activities that may be performed by pharmacy technicians and those that must be performed by licensed pharmacists, including final check.
13.10	Explain the importance of technology and its current use in various pharmacy settings.
13.11	Utilize emerging technologies such as AI to cross-reference reports with dispense/administration history to address unaccounted medications.
14.0	Perform clerical duties as related to Pharmacy Practice. The student will be able to:
14.01	Utilize pharmaceutical medical terminology.
14.02	Identify the major symbols and abbreviations used on prescriptions and state the meaning.
14.03	Utilize pharmacy reference manuals or websites.
14.04	Demonstrate retail pharmacy dispensing processes.
14.05	Utilize pharmacy software in processing pharmacy prescription data.
14.06	Identify and discuss applications of E-Prescribing and facsimile.
14.07	Utilize and apply interactive communication skills while gathering accurate information from patients and other healthcare professionals.
14.08	Create, complete, and maintain patient profiles including third-party billing information.
14.09	Understand the processes of PBMs and third-party billing, resolving rejections, and obtaining prior authorizations.
14.10	Demonstrate professional communication skills within the scope of practice for the pharmacy technician.
14.11	Demonstrate knowledge of systems used in maintaining pharmacy records.

15.0	Demonstrate knowledge of medication safety and prevention of medication errors. The student will be able to:
15.01	Identify communication modalities that can result in the transmission of inaccurate information and explain specific ways to make improvements.
15.02	Convey an understanding of the patient's Bill of Rights for medication administration as it relates to pharmacy practice.
15.03	Identify and explain appropriate patient safety goals by applicable accrediting and regulatory organizations
15.04	Identify potential errors that may result in quality-related events (QRE) and explain specific ways they can be prevented.
15.05	Describe safety strategies used to prevent medication errors due to pharmaceutical abbreviations and terminology.
15.06	Summarize, evaluate, and describe the technician's role in quality assurance activities as related to various pharmacy practices.
16.0	Demonstrate knowledge of inventory management. The student will be able to:
16.01	Convey an understanding of industry standards in purchasing pharmaceutical supplies.
16.02	Demonstrate how to maintain a controlled substance inventory.
16.03	Understand pharmacy business math in prescription pricing systems.
16.04	Maintain stock inventory, communicate shortages, and seek solutions to maintain continuity of patient care.
16.05	Understand the process of how to create electronic purchase orders.
16.06	Accurately perform the process of purchasing, receiving, special handling, storing, distributing, and disposing of pharmaceutical supplies.
16.07	Convey an understanding of recall management and know the differences between types of recalls and how to address them.
16.08	Convey an understanding of the inventory control process implemented by Title II of the Drug Quality and Security Act.
17.0	Initiate measurement and calculating techniques as they relate to United States Pharmacopeia (USP) 795 (non-sterile) compounding in pharmacy practice. The student will be able to:
17.01	Convey an understanding of United States Pharmacopeia (USP) 795 standards.
17.02	Convert measurements within the apothecary, avoirdupois, household, and metric systems.
17.03	Perform common pharmaceutical calculations.
17.04	Identify and utilize common pharmaceutical weighing equipment.
17.05	Identify and utilize common pharmaceutical volume measurement equipment.

	17.06 Accurately demonstrate the technique of preparing common non-sterile pharmaceutical compounds.
	17.07 Summarize, evaluate, and describe the technician's role in quality assurance activities as related to the preparation of non-sterile products.
18.0	Demonstrate basic knowledge and skills in areas of anatomy/ physiology, pharmacology, and drug classification relevant to pharmacy technicians. The student will be able to:
	18.01 Evaluate and apply anatomical terminology to describe the location of parts or areas of the body and related disease processes.
	18.02 Define the major classifications of pharmaceuticals and conditions treated.
	18.03 Demonstrate knowledge of trade and generic name equivalents.
	18.04 Evaluate the pharmacy technician's understanding of pharmacology, including drug classifications, mechanisms of action, common side effects, and interactions.
	18.05 Identify at least one official compendium of standards for quality and purity of drug monographs.
	18.06 Convey an understanding of Investigational Drugs, Risk Evaluation and Mitigation Strategies (REMS), off-label indications, and emerging drug therapy.
	18.07 Demonstrate an understanding of common adult doses of medications, duration of common drug therapies, and respective contraindications, including the BEERS Criteria.
	18.08 Identify potential interactions that require a pharmacist's intervention pertaining to food/alcohol, herbal, OTC, and/or prescription medications.
	18.09 Identify allergy histories during the medication reconciliation process and discern "allergy" vs "side effect" in optimizing care.
19.0	Prepare and deliver medications. The student will be able to:
	19.01 Read and prepare medication orders correctly.
	19.02 Demonstrate institutional pharmacy dispensing processes.
	19.03 Compare all new orders with medications listed on profiles while noting any changes.
	19.04 Utilize special precautions in the preparation of medications for pediatric patients.
	19.05 Explain how to safely transport medications, being aware of hazards, theft, legal implications of accidental loss, and other consequences.
	19.06 Understand how to correctly fill and deliver medication.
	19.07 Collect data from the medication administration record.
	19.08 Describe the use of automated medication dispensing equipment.
20.0	Repackage unit-dose medications. The student will be able to:

20.01	Locate the correct stock container.
20.02	Describe the use of unit-dose packaging equipment.
20.03	Measure, count, and place the individual dose in appropriate containers.
20.04	Understand precautions used when packaging unit-dose hazardous drugs.
20.05	Record repackaged medication data correctly.
20.06	Summarize, evaluate, and describe the technician's role in quality assurance activities as related to repackaging unit-dose medication.
21.0	Prepare United States Pharmacopeia (USP) 797 and USP 800 sterile products. The student will be able to:
21.01	Convey an understanding of United States Pharmacopeia (USP) 797 regulations.
21.02	Convey an understanding of United States Pharmacopeia (USP) 800 regulations.
21.03	Compare the medication order with the label on the vial and check the expiration date of the product.
21.04	Calculate drug dosage for parenteral use.
21.05	Reconstitute parenteral medications.
21.06	Demonstrate aseptic technique to withdraw medication from stock vial, measure correct quantity as instructed, select and insert it into IV solution without error.
21.07	Demonstrate aseptic technique to withdraw medication from an ampule using a filter needle/straw.
21.08	Prepare parenteral solutions using proper aseptic technique.
21.09	Understand the preparation of Total Parenteral Nutrition (TPN) solutions.
21.10	Understand the preparation of chemotherapeutic agents using proper safety techniques.
21.11	Understand the appropriate technique while using specialized equipment such as laminar flow hoods, filters, pumps, automated compounders, and barrier isolators.
21.12	Place label on IV solution container and record appropriately.
21.13	Perform a quality control check of the completed product.
21.14	Convey an understanding of the proper storage and disposal requirements of reconstituted and non-reconstituted IV solutions.
21.15	Convey an understanding of the proper storage and disposal of hazardous drugs.

	21.16 Summarize, evaluate, and describe the technician's role in quality assurance activities related to the preparation of sterile products.
	21.17 Understand the concept of Diversion Surveillance to assist in recognizing controlled substances.
22.0	Recognize consumer economic activities. The student will be able to:
	22.01 Identify basic concepts of the American economic system.
	22.02 Identify basic types and sources of consumer credit.
23.0	Perform decision-making activities. The student will be able to:
	23.01 Demonstrate the ability to determine the proper priority of work.
	23.02 Prepare a day’s schedule for the employer.
	23.03 Choose appropriate action in situations requiring application of business ethics.
	23.04 Choose appropriate action in situations requiring following a chain of command.
	23.05 Choose appropriate action in situations requiring effective time management.
24.0	Demonstrate leadership skills. The student will be able to:
	24.01 Prepare an agenda and minutes.
	24.02 Demonstrate the ability to conduct an orderly meeting.
	24.03 Greet and introduce individuals.
	24.04 Demonstrate ability to give clear directions, fair assignments, and constructive criticism.
	24.05 Demonstrate ability to manage a team.
25.0	Identify, classify, and demonstrate management activities. The student will be able to:
	25.01 Define management.
	25.02 Identify various management positions.
	25.03 Identify various management styles.
	25.04 Identify the major functions of management.
	25.05 Classify activities as part of the planning function of management.

25.06	Classify activities as part of the organizing function of management.
25.07	Classify activities as part of the staffing function of management.
25.08	Classify activities as part of the directing function of management.
25.09	Classify activities as part of the controlling function of management.
25.10	Demonstrate the ability to perform planning, organizing, staffing, directing, and controlling activities of management.
25.11	Demonstrate knowledge of the relationship between authority and responsibility to task accomplishment.
25.12	Select the most effective communication systems.
25.13	Identify problems and make appropriate decisions.
25.14	Identify how to build and maintain a network inside and outside of your organization.

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools, and equipment, as well as experimental, quality, and safety procedures, are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate, and troubleshoot equipment/tools used to make observations. Students understand measurement error and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

Clinical practicum experiences are an integral part of this program.

Special Notes

This program must be approved by the Board of Pharmacy. Program completers who wish to work as Pharmacy Technicians in the State of Florida must register with the Board of Pharmacy (465.014, F.S.).

Due to the clinical experiences students are engaged in through the program and to ensure the safety of both the students and the patients the recommended student to instructor ratio in the classroom is 20:1 and in the lab is 4:1.

This program meets the Department of Health's education requirements for HIV/AIDS, Domestic Violence and Prevention of Medical Errors. Although not a requirement for initial licensure, it is a requirement for renewal, therefore the instructor **may** provide a certificate for renewal purposes to the student verifying these requirements have been met.

If students in this program are seeking a licensure, certificate, or registration through the Department of Health, please refer to 456.0635, F.S. for more information on disqualification for a license, certificate, or registration through the Department of Health.

It is recommended that program completers take national pharmacy technician certification exam offered by the Pharmacy Technician Certification Board, 2215 Constitution Ave, Washington, DC 20037-2985, (202) 429-7576. This certification is offered three times annually.

Cooperative training - OJT is appropriate for this program. When cooperative training is offered, the following is required for each student: a training plan, signed by the student, instructor and employer which includes instructional objectives and a list of on-the-job and in-school learning experiences; a workstation which reflects equipment, skills and tasks which are relevant to the occupations which the student has chosen as a career goal. **Students must receive compensation for work performed.**

The CORE should be taken first in the program. Following the successful completion of the core, the student is eligible to take the National Health Care Foundation Skill Standards Assessment with instructor approval and the completion of a portfolio.

General Education Course Requirements for AS and AAS Degrees

State Board of Education Rule 6A-14.030(4), F.A.C., identifies 15 credit hours as the minimum amount of general education coursework required in the Associate of Science (AS) degree and the Associate of Applied Science (AAS) degree. In addition, Rule 6A-14.0303, F.A.C., implements s. 1007.25, F.S., and requires students entering a technical education degree program in the 2022-2023 academic year, and thereafter, to complete at least one identified core course in each subject area as part of the general education course requirements (15 credit hours total) before a degree is awarded) The core subject areas include:

- Communication.
- Humanities.
- Mathematics.
- Natural Sciences.
- Social Sciences.

Career and Technical Student Organization (CTSO)

CTSOs are co-curricular career and technical student organizations providing leadership training and reinforcing specific career and technical skills. Career and Technical Student Organizations provide activities for students as an integral part of the instruction offered. Other CTSOs not listed in this curriculum framework or recognized by the Florida Department of Education are permissible provided they support student mastery over the standards and benchmarks of this curriculum framework.

Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology, and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

Florida Department of Education
Curriculum Framework

The standards and benchmarks for this program were updated for the 2026-27 academic year.

Program Title: **Physical Therapist Assistant**
Career Cluster: **Health Science**

Associate in Science	
CIP Number	1351080601
Program Type	College Credit
Program Length	74 credit hours
CTSO	HOSA
SOC Codes (all applicable)	For program SOC codes, please see the Program and Course Tables section of the CTE Program Resources page linked below.
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml

Purpose

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Health Science career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of Health Science career cluster.

The purpose of this program is to prepare students for employment as physical therapist assistants.

The content includes but is not limited to the requirements of the Commission on Accreditation in Physical Therapy Education (https://www.capteonline.org/), 3030 Potomac Avenue, Suite 100, Alexandria, VA 22305, (800) 999-2782.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Program Structure

This program is a planned sequence of instruction consisting of 74 credit hours.

When developing the course sequence for the local implementation of this program, select courses that:

- Meet the skill development requirements of the standards and benchmarks of this program.
- Meet the general education core course requirements of Rule 6A-14.0303, Florida Administrative Code.
- Where reasonable and practicable, align with programs offered by your institution or other postsecondary institutions in Florida, including:
    - Related CCC and ATD credentials.
    - Baccalaureate degrees within the same career pathway and/or Federal CIP code.

Visit FloridaShines' Discover Programs website to identify other institutions that offer similar programs to review their course sequencing. Where appropriate, course alignment between institutions offering related programs can facilitate interagency student articulation.

Visit FloridaShines' Common Prerequisites Manual to identify courses that are prerequisites for admission into an upper division program. When sub-baccalaureate courses are aligned to the course admissions requirements of baccalaureate programs with the same career pathway, students can enter upper division coursework seamlessly.

Regulated Programs

A graduate of this program is prepared to apply to the Federation of State Boards of Physical Therapy for the National Physical Therapy Exam (https://www.fsbpt.org/) and the Florida Board of Physical Therapy for the Physical Therapist Assistant Licensure examination (https://floridasphysicaltherapy.gov/).

Florida's Career Readiness Skills for CTE Programs

Employability Skills	
01.0	Apply academic skills to workplace scenarios.
01.01	Use reading skills.
01.02	Use writing skills.
01.03	Use mathematical strategies and procedures.
01.04	Use scientific principles and procedures.
02.0	Design a solution to an industry problem.
02.01	Use critical thinking.
02.02	Use creativity.
02.03	Make sound decisions.
02.04	Solve problems.
02.05	Reason.
02.06	Plan and organize.
03.0	Manage resources within an industry project
03.01	Manage time.
03.02	Manage money or resources.
03.03	Manage materials.
03.04	Manage personnel.
04.0	Oversee the subcomponents, operations and output of a technical or organizational system.
04.01	Manage systems.
04.02	Monitor systems.
04.03	Improve systems.
05.0	Use information for decision making.
05.01	Locate information.
05.02	Organize information.
05.03	Use information.

	05.04 Analyze information.
	05.05 Communicate information.
06.0	Apply relevant technology to workplace scenarios to aid productivity.
	06.01 Use technology.
07.0	Interpret and express interpersonal communication.
	07.01 Communicate verbally.
	07.02 Listen actively.
	07.03 Comprehend written material.
	07.04 Convey information in writing.
	07.05 Communicate nonverbally.
	07.06 Interpret nonverbal communication.
08.0	Interact with others to accomplish workplace goals.
	08.01 Collaborate with others in a team.
	08.02 Respond to customer needs.
	08.03 Exercise leadership.
	08.04 Negotiate to resolve conflict.
	08.05 Respect others.
09.0	Manage personal behavior to maximize productivity and professional growth.
	09.01 Demonstrate responsibility and self-discipline.
	09.02 Adapt and show flexibility.
	09.03 Work independently.
	09.04 Demonstrate a willingness to learn.
	09.05 Demonstrate integrity.
	09.06 Demonstrate professionalism.
	09.07 Take initiative.
	09.08 Display positive attitude.
	09.09 Take responsibility for professional growth.

Job Attainment	
10.0	Find, assess and apply to job opportunities.
10.01	Identify online job posts relevant to his or her career aspirations.
10.02	Compare and contrast the job posts' required qualifications, job duties, compensation, benefits and employers.
10.03	Define what information, documentation and writing prompts are required for the positions.
11.0	Communicate personal competence, character and fit for a job opportunity.
11.01	Develop a resume.
11.02	Write a cover letter.
11.03	Curate a professional portfolio that includes work products.
11.04	Prepare for and experience a mock job interview.
12.0	Cultivate and leverage relationships to professionally advance.
12.01	Request a signed reference letter, letter of recommendation and/or an online skill/professionalism endorsement.
12.02	Develop a plan to cultivate a professional digital footprint.
12.03	Develop a networking plan for a specific industry of interest.

Standards

After successfully completing this program, the student will be able to perform the following:

Health Science Core (Standards 1-11)

01.0 Demonstrate knowledge of the healthcare delivery system and health occupations.
02.0 Demonstrate the ability to communicate and use interpersonal skills effectively.
03.0 Demonstrate legal and ethical responsibilities.
04.0 Demonstrate an understanding of and apply wellness and disease concepts.
05.0 Recognize and practice safety and security procedures.
06.0 Recognize and respond to emergency situations.
07.0 Recognize and practice infection control procedures.
08.0 Demonstrate an understanding of information technology applications in healthcare.
09.0 Demonstrate employability skills.
10.0 Demonstrate knowledge of blood-borne diseases, including HIV/AIDS.
11.0 Apply basic math and science skills.
12.0 Describe anatomical structure, function, and dysfunction of the human body related to the practice of physical therapy.
13.0 Demonstrate ethical, legal, and professional standards of practice as a physical therapist assistant.
14.0 Demonstrate the knowledge and skills necessary to provide comprehensive patient/client management and implement a comprehensive plan of care as established by a physical therapist.
15.0 Demonstrate competence in implementing selected components of interventions identified in the plan of care established by a physical therapist to achieve patient/client goals and outcomes for the following: Cardiovascular conditions, Pulmonary conditions, Neurological conditions, Musculoskeletal conditions, Integumentary and lymphatic conditions, Metabolic conditions, Growth and human development,Pain and pain experiences.
16.0 Demonstrate competence in performing components of data collection skills essential for carrying out the plan of care by administering appropriate tests and measuring outcomes before, during, and after interventions.
17.0 Participate in the healthcare environment as a member of a patient/client-centered interprofessional collaborative team.

Florida Department of Education
Student Performance Standards

Program Title: **Physical Therapist Assistant**
CIP Number: **1351080601**
Program Length: **74 credit hours**

Standards 1-11 are referred to as the **Health Science Core** and are required standards in this program. Secondary and Postsecondary students completing the health science core will not have to repeat the core in any other health science program in which it is a part. When the recommended sequence is followed, the structure allows students to complete at specified points for employment or remain for advanced training or cross-training.

To ensure consistency whenever these courses are offered, the Health Science Core standards (1-11) and benchmarks have been placed in a separate document. To access this document, visit this link:
https://www.fldoe.org/core/fileparse.php/20569/urlt/health-sci-core-psav-cc-2324.rtf

At the completion of this program, the student will be able to:	
12.0	Describe anatomical structure, function, and dysfunction of the human body related to the practice of physical therapy. The student will be able to:
12.01	Label the following topographic terms: • medial • lateral • proximal • distal • superior • inferior • anterior • posterior • midline • right and left • bilateral
12.02	Identify and describe the anatomical structures and functions as related to physical therapy interventions and patient/client outcomes, their possible adverse effects, complications, and how interventions may influence other body systems for the following: • Cardiovascular system • Endocrine and metabolic systems • Gastrointestinal system • Genital and Reproductive systems

	• Hematologic system • Hepatic and Biliary systems • Immune system • Integumentary system • Lymphatic system • Musculoskeletal system • Neurological system • Pulmonary system • Renal and Urologic systems
12.03	Demonstrate an understanding of how to apply foundational knowledge of medical/surgical conditions by identifying pathological conditions, their impact on patient/client function, and the selection of interventions that support appropriate and effective patient/client management for rehabilitation across the lifespan within the Physical Therapy plan of care.
13.0	Demonstrate ethical, legal, and professional standards of practice as a physical therapist assistant. The student will be able to:
13.01	Act in a manner that is consistent with the American Physical Therapy Association's Standards of Ethical Conduct for the Physical Therapist Assistant, ensuring adherence to professional conduct in all interactions.
13.02	Demonstrate an understanding of the laws and regulations governing the profession of physical therapy in Florida Statute and other laws and regulations including but not limited to ADA, IDEA, HIPAA, and Patients' Bill of Rights.
13.03	Practice under the direction and supervision of a Licensed Physical Therapist (PT), maintaining a collaborative relationship in the delivery of care.
13.04	Demonstrate behaviors that align with the American Physical Therapy Association's Core Values for the Physical Therapist Assistant, including accountability, altruism, compassion, and integrity.
13.05	Recognize and uphold the dignity and independence of patients/clients, respecting their autonomy in decision-making.
13.06	Recognize and appropriately respond to verbal and non-verbal patient/client expressions of discomfort, spoken or unspoken (body language).
13.07	Demonstrate sensitivity to the patient/client's emotional responses.
13.08	Recognize own bias to the patient/client's illness or disability and understand how that may affect treatment outcome.
13.09	Recognize patient/client's and caregiver's emotional, psychological, and social reactions to illness and disability.
13.10	Demonstrate sensitivity to individual, cultural, religious and socio-economic differences in patients/clients, caregivers, and colleagues, fostering an inclusive environment.
13.11	Identify the physical therapist assistant's role/scope as it relates to patient/client care, departmental function, direction and supervision, and unlicensed personnel.
13.12	Determine and recognize tasks and duties that are beyond the scope of practice for the physical therapist assistant and communicate appropriately with the supervising physical therapist.
13.13	Communicate information effectively to the patient/client, caregiver, healthcare delivery personnel, and other relevant stakeholders.

13.14	Utilize equipment and resources safely, efficiently, and effectively in the delivery of healthcare.
13.15	Manage time effectively in all aspects of healthcare.
13.16	Adhere to all relevant legal practice standards, including all federal, state, and institutional regulations related to patient/client care, documentation, and fiscal management.
13.17	Report to appropriate authorities suspected cases of abuse or neglect of vulnerable populations.
13.18	Report to appropriate authorities suspected cases of fraud and abuse related to payment for physical therapy and other healthcare services.
13.19	Implement, in response to an ethical situation, a plan of action that demonstrates sound moral reasoning congruent with core professional ethics and values.
13.20	Apply current knowledge, theory, and clinical judgment including evidence-based practice, while considering the patient/client perspective and the environment, based on the plan of care established by the physical therapist.
13.21	Identify basic concepts in professional literature including, but not limited to, validity, reliability, and level of statistical significance.
13.22	Identify and integrate appropriate evidence-based resources into clinical decision-making to optimize patient/client care and support the achievement of goals outlined in the plan of care established by the physical therapist.
13.23	Participate in professional and community organizations that provide opportunities for volunteerism, advocacy, leadership, and professional growth.
13.24	Identify career development and lifelong learning opportunities, including the role of the physical therapist assistant in the clinical education of physical therapist assistant students.
14.0	Demonstrate the knowledge and skills necessary to provide comprehensive patient/client management and implement a comprehensive plan of care as established by a physical therapist. The student will be able to:
14.01	Contribute to the discontinuation of the episode of care and follow-up planning as directed by the supervising physical therapist.
14.02	Review patient/client medical records and the plan of care to identify pertinent information related to the patient/client's diagnosis.
14.03	Collaborate with patients/clients, caregivers, and other healthcare personnel to obtain current information and report relevant findings to the supervising physical therapist.
14.04	Identify indications, precautions, and contradictions for each treatment/procedure and apply appropriate interventions within the scope of the plan of care.
14.05	Report any changes in patient/client status or progress to the supervising physical therapist and other appropriate healthcare personnel in a timely manner.
14.06	Communicate an understanding of the plan of care developed by the physical therapist to achieve short- and long-term goals and intended outcomes.
14.07	Determine a baseline physiological state.
14.08	Recognize changes in a baseline physiological state, determine the significance of change(s), and report them to the supervising physical therapist.
14.09	Use the International Classification of Functioning, Disability and Health (ICF) to describe a patient/client's impairments to body

		functions and structures, activity limitations, and participation restrictions.
	14.10	Monitor, adjust, and discontinue interventions based on the patient/client response and clinical data collection in collaboration with the supervising physical therapist.
	14.11	Recognize situations that require further clarification, supervision, or action by the supervising physical therapist.
	14.12	Determine when an intervention is inappropriate based on the review of current information and patient/client presentation.
	14.13	Select interventions as determined by the supervising physical therapist, that are based on clinical data, to achieve goals and intended outcomes.
	14.14	Modify, adjust, and discontinue interventions based on the patient/client response and clinical data in collaboration with the supervising physical therapist.
15.0		Demonstrate competence in implementing selected components of interventions identified in the plan of care established by a physical therapist to achieve patient/client goals and outcomes for the following: The student will be able to: • Cardiovascular conditions • Pulmonary conditions • Neurological conditions • Musculoskeletal conditions • Integumentary and lymphatic conditions • Metabolic conditions • Growth and human development • Pain and pain experiences
	15.01	Administer activities of daily living and functional training to patients/clients.
	15.02	Perform postural training techniques.
	15.03	Perform acceptable portions of manual therapy treatments, including grades I & II peripheral joint mobilizations, within the physical therapist assistant scope of practice.
	15.04	Perform balance and coordination activities.
	15.05	Perform developmental activities.
	15.06	Appropriately implement therapeutic exercise programs.
	15.07	Apply external bandages, dressings, and support devices.
	15.08	Perform wound management within the physical therapist assistant scope of practice.
	15.09	Measure and properly fit assistive devices.
	15.10	Perform gait training in household and community environments with appropriate assistive device(s).

	15.11 Perform appropriate wheelchair assessment and locomotion training in household and community environments.
	15.12 Describe the therapeutic benefits of exercise.
	15.13 Identify orthotic and prosthetic devices and state the importance of proper fit and assessment of skin integrity.
	15.14 Describe upper and lower extremity prosthetics in terms of types of amputations.
	15.15 Identify common problems in orthotic and prosthetic management and apply decision-making skills in dealing effectively with them.
	15.16 Instruct patient/client or caregiver in orthotic and prosthetic management and assist patient/client in problem-solving techniques.
	15.17 Perform airway clearance techniques and instruct patient/client in proper coughing and breathing exercises.
	15.18 Effectively educate others using teaching methods that are commensurate with the needs of the patient/client, caregiver, or healthcare personnel.
	15.19 Demonstrate appropriate use of medical terminology and layman's terms.
	15.20 Define and describe the importance of the following terms: • disinfect • sterilize • germicide • antiseptic • septic
	15.21 Demonstrate appropriate isolation, sterile techniques, and disinfection of equipment.
	15.22 State the therapeutic temperature range for modalities in which temperature is a guideline for application.
	15.23 Identify physiological effects of heat vs. cold applications.
	15.24 Demonstrate appropriate therapeutic use of biophysical agents including biofeedback, electrotherapeutic agents, compression therapies, cryotherapy, hydrotherapy, superficial and deep thermal agents, traction, and light therapies.
	15.25 Describe the therapeutic actions and side effects of commonly used pharmacological agents in rehabilitation.
16.0	Demonstrate competence in performing components of data collection skills essential for carrying out the plan of care by administering appropriate tests and measuring outcomes before, during, and after interventions. The student will be able to:
	16.01 Recognize and describe normal and abnormal motor behavior.
	16.02 Detect and describe normal and abnormal joint movement.
	16.03 Perform appropriate measurement and assessment techniques within the knowledge and limits of practice to assist the supervising physical therapist in monitoring and modifying the plan of care.

16.04	Recognize gait deviations and compensatory strategies.
16.05	Demonstrate competence in performing components of data collection skills essential for carrying out the plan of care such as standard vital signs, perceived exertion scales, anthropometrical characteristics, and mental functions.
16.06	Perform goniometric measurement.
16.07	Identify which environmental factors are potential architectural barriers.
16.08	Determine which architectural barriers will impact a patient/client's functional level including the use of ambulatory/mobility equipment.
16.09	Document all aspects of treatment using the correct format, content, and terminology.
16.10	Appropriately recognize and monitor responses to positional changes and activities (e.g., orthostatic hypotension and exercise).
16.11	Identify the patient/client's and caregiver's ability to care for the assistive equipment, prosthetics and orthotics; recognize changes in skin condition and safety factors while using devices and equipment.
16.12	Determine the safety, status, and progression of patients/clients while engaged in gait, locomotion, balance, wheelchair management, and mobility.
16.13	Detect absent or altered sensation; normal and abnormal integumentary changes; activities, positioning, and postures that aggravate or relieve pain or altered sensations, or that can produce associated skin trauma; and recognize viable versus nonviable tissue.
16.14	Measure muscle strength by manual muscle testing; observe the presence or absence of muscle mass; and recognize normal and abnormal muscle length and changes in muscle tone.
16.15	Administer standardized questionnaires, graphs, behavioral scales, or visual analog scales for pain; recognize activities, positioning, and postures that aggravate or relieve pain or altered sensations.
16.16	Determine normal and abnormal alignment of trunk and extremities at rest and during activities.
16.17	Detect signs and symptoms of respiratory distress and activities that aggravate or relieve edema, pain, dyspnea, or other symptoms; describe thoracoabdominal movements and breathing patterns with activity, and cough and sputum characteristics.
16.18	Respond efficiently and effectively to patient/client and environmental emergencies that commonly occur in the clinical setting.
17.0	Participate in the healthcare environment as a member of a patient/client-centered interprofessional collaborative team. The student will be able to:
17.01	Prepare patient/client and treatment areas to ensure equipment is in proper working order.
17.02	Clean and check operation of wheelchairs, assistive devices, treatment tables, electrical equipment, etc.
17.03	Demonstrate how to properly operate patient/client equipment.
17.04	Instruct in safety considerations for equipment, indications, precautions, and contraindications of a specific physical therapy intervention.
17.05	Implement appropriate patient/client safety precautions related to the plan of care.

17.06	Describe disciplines within the healthcare system and identify the roles of each discipline related to patient/client interventions.
17.07	Describe the categories of healthcare agencies.
17.08	Recognize current issues, problems, and trends affecting the delivery of healthcare.
17.09	Participate in performance improvement activities (quality assurance).

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as, experimental, quality, and safety procedures are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate and troubleshoot equipment/tools used to make observations. Students understand measurement error; and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

Laboratory work is structured so that students begin with basic patient/client care skills, progress to basic physical therapy skills and then to more advanced physical therapy application and techniques.

Special Notes

This program meets the Department of Health's education requirements for HIV/AIDS, Domestic Violence, and Prevention of Medical Errors. Although not a requirement for initial licensure, it is a requirement for renewal, therefore the instructor **may** provide a certificate for renewal purposes to the student verifying these requirements have been met.

If students in this program are seeking a licensure, certificate, or registration through the Department of Health, please refer to s. 456.0635, F.S. for more information on disqualification for a license, certificate, or registration through the Department of Health.

The Health Science Core (Core) must be taken by all students planning to complete any Health Occupations program (secondary and postsecondary). Once successfully completed, the Core does not need to be repeated at any instructional level.

This program focuses on broad, transferable skills and stresses understanding and demonstration of the following elements of the healthcare industry; planning, management, finance, technical and production skills, underlying principles of technology, labor issues, community issues, and health, safety, and environmental issues.

The cooperative method of instruction is not appropriate for this program.

The Health Science Core (Core) should be taken first in the program. Following the successful completion of the Core, the student is eligible to take the National Health Care Foundation Skill Standards Assessment with instructor approval and the completion of a portfolio.

General Education Course Requirements for AS and AAS Degrees

State Board of Education Rule 6A-14.030(5 and 6), F.A.C., identifies 15 credit hours as the minimum amount of general education coursework required in the Associate of Science (AS) degree and the Associate of Applied Science (AAS) degree. In addition, Rule 6A-14.0303, F.A.C., implements s. 1007.25, F.S., and requires students entering a technical education degree program in the 2022-2023 academic year, and thereafter,

to complete at least one identified core course in each subject area as part of the general education course requirements (15 credit hours total) before a degree is awarded. The core subject areas include:

- Communication.
- Humanities.
- Mathematics.
- Natural Sciences.
- Social Sciences.

Career and Technical Student Organization (CTSO)

CTSOs are co-curricular career and technical student organizations providing leadership training and reinforcing specific career and technical skills. Career and Technical Student Organizations provide activities for students as an integral part of the instruction offered. Other CTSOs not listed in this curriculum framework or recognized by the Florida Department of Education are permissible provided they support student mastery over the standards and benchmarks of this curriculum framework.

Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

Florida Department of Education
Curriculum Framework

The standards and benchmarks for this program were updated for the 2026-27 academic year.

Program Title: **Cardiovascular Technology**
Career Cluster: **Health Science**

Associate in Science	
CIP Number	1351090100
Program Type	College Credit
Program Length	77 credit hours
CTSO	HOSA
SOC Codes (all applicable)	For program SOC codes, please see the Program and Course Tables section of the CTE Program Resources page linked below.
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml

Purpose

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Health Science career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of Health Science career cluster.

The program is designed to prepare students for employment as cardiovascular technologists and technicians.

The content includes but is not limited to instruction in performing examinations leading to diagnosis and treatment of patients with cardiovascular disease. A clinical component is a necessary element to a program. Reinforcement of basic skills in English, mathematics and science occurs through classroom instruction and applied laboratory practice.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Program Structure

This program is a planned sequence of instruction consisting of 77 credit hours.

When developing the course sequence for the local implementation of this program, select courses that:

- Meet the skill development requirements of the standards and benchmarks of this program.
- Meet the general education core course requirements of Rule 6A-14.0303, Florida Administrative Code.
- Where reasonable and practicable, align with programs offered by your institution or other postsecondary institutions in Florida, including:
    - Related CCC and ATD credentials.
    - Baccalaureate degrees within the same career pathway and/or Federal CIP code.

Visit FloridaShines' Discover Programs website to identify other institutions that offer similar programs to review their course sequencing. Where appropriate, course alignment between institutions offering related programs can facilitate interagency student articulation.

Visit FloridaShines' Common Prerequisites Manual to identify courses that are prerequisites for admission into an upper division program. When sub-baccalaureate courses are aligned to the course admissions requirements of baccalaureate programs with the same career pathway, students can enter upper division coursework seamlessly.

Florida's Career Readiness Skills for CTE Programs

Employability Skills	
01.0	Apply academic skills to workplace scenarios.
01.01	Use reading skills.
01.02	Use writing skills.
01.03	Use mathematical strategies and procedures.
01.04	Use scientific principles and procedures.
02.0	Design a solution to an industry problem.
02.01	Use critical thinking.
02.02	Use creativity.
02.03	Make sound decisions.
02.04	Solve problems.
02.05	Reason.
02.06	Plan and organize.
03.0	Manage resources within an industry project
03.01	Manage time.
03.02	Manage money or resources.
03.03	Manage materials.
03.04	Manage personnel.
04.0	Oversee the subcomponents, operations and output of a technical or organizational system.
04.01	Manage systems.
04.02	Monitor systems.
04.03	Improve systems.
05.0	Use information for decision making.
05.01	Locate information.
05.02	Organize information.
05.03	Use information.

	05.04 Analyze information.
	05.05 Communicate information.
06.0	Apply relevant technology to workplace scenarios to aid productivity.
	06.01 Use technology.
07.0	Interpret and express interpersonal communication.
	07.01 Communicate verbally.
	07.02 Listen actively.
	07.03 Comprehend written material.
	07.04 Convey information in writing.
	07.05 Communicate nonverbally.
	07.06 Interpret nonverbal communication.
08.0	Interact with others to accomplish workplace goals.
	08.01 Collaborate with others in a team.
	08.02 Respond to customer needs.
	08.03 Exercise leadership.
	08.04 Negotiate to resolve conflict.
	08.05 Respect others.
09.0	Manage personal behavior to maximize productivity and professional growth.
	09.01 Demonstrate responsibility and self-discipline.
	09.02 Adapt and show flexibility.
	09.03 Work independently.
	09.04 Demonstrate a willingness to learn.
	09.05 Demonstrate integrity.
	09.06 Demonstrate professionalism.
	09.07 Take initiative.
	09.08 Display positive attitude.
	09.09 Take responsibility for professional growth.

Job Attainment	
10.0	Find, assess and apply to job opportunities.
10.01	Identify online job posts relevant to his or her career aspirations.
10.02	Compare and contrast the job posts' required qualifications, job duties, compensation, benefits and employers.
10.03	Define what information, documentation and writing prompts are required for the positions.
11.0	Communicate personal competence, character and fit for a job opportunity.
11.01	Develop a resume.
11.02	Write a cover letter.
11.03	Curate a professional portfolio that includes work products.
11.04	Prepare for and experience a mock job interview.
12.0	Cultivate and leverage relationships to professionally advance.
12.01	Request a signed reference letter, letter of recommendation and/or an online skill/professionalism endorsement.
12.02	Develop a plan to cultivate a professional digital footprint.
12.03	Develop a networking plan for a specific industry of interest.

Standards

After successfully completing this program, the student will be able to perform the following:

01.0 Demonstrate knowledge of the health care delivery system and health occupations.
02.0 Demonstrate the ability to communicate and use interpersonal skills effectively.
03.0 Demonstrate legal and ethical responsibilities.
04.0 Demonstrate an understanding of and apply wellness and disease concepts.
05.0 Recognize and practice safety and security procedures.
06.0 Recognize and respond to emergency situations.
07.0 Recognize and practice infection control procedures.
08.0 Demonstrate an understanding of information technology applications in healthcare.
09.0 Demonstrate employability skills.
10.0 Demonstrate knowledge of blood borne diseases, including HIV/AIDS.
11.0 Apply basic math and science skills.
12.0 Explore career opportunities in one or more of the following: invasive cardiovascular technology (cardiac catheterization, invasive cardiac electrophysiology and non-invasive adult echocardiography, pediatric echocardiography, non-invasive vascular technology.
13.0 Identify the anatomic structure and function of body systems in relation to cardiovascular disease and studies.
14.0 Demonstrate the ability to recognize normal and abnormal electrocardiogram (EKG) rhythms and arrhythmias as each apply to intra-procedural therapies.
15.0 Practice safety and quality assurance.
16.0 Follow professional principles related to the practice of cardiovascular technology.
17.0 Use basic medical electronics and medical instrumentation.
18.0 Describe the role of the cardiovascular technologist in catastrophic event management.
19.0 Discuss the pharmacological aspects of cardiovascular drugs.
20.0 Perform patient care, record patient history and practice effective communication.

One of the following sub-specialties must be added to the intended outcomes for students to complete the Cardiovascular Technology AS degree:

21.0 Assist in all aspects of invasive cardiovascular diagnostic and interventional procedures and techniques with emphasis on cardiac catheterization.
22.0 Perform noninvasive cardiovascular techniques with an emphasis on echocardiography.
23.0 Perform noninvasive peripheral vascular studies.
24.0 Perform noninvasive cardiovascular techniques with an emphasis on echocardiography related to the pediatric patient.
25.0 Assist in all aspects of cardiovascular electrophysiology procedure.

Florida Department of Education
Student Performance Standards

Program Title: **Cardiovascular Technology**
CIP Number: **1351090100**
Program Length: **77 credit hours**

Standards 1-11 are referred to as the **Health Science Core** and are required standards in this program. Secondary and Postsecondary students completing the health science core will not have to repeat the core in any other health science program in which it is a part. When the recommended sequence is followed, the structure allows students to complete at specified points for employment or remain for advanced training or cross-training.

To ensure consistency whenever these courses are offered, the health science core standards (1-11) and benchmarks have been placed in a separate document. To access this document, visit this link:
https://www.fldoe.org/core/fileparse.php/20569/urlt/health-sci-core-psav-cc-2324.rtf

At the completion of this program, the student will be able to:	
12.0	Explore career opportunities in one or more of the following: invasive cardiovascular technology (cardiac catheterization, invasive cardiac electrophysiology and non-invasive adult echocardiography, pediatric echocardiography, non-invasive vascular technology. The student will be able to:
12.01	Describe the CVT profession, including but not limited to, history, accreditation, education, job conditions, salaries, critical thinking and team building.
12.02	Identify the cardiovascular professional organizations and discuss their roles (SDMS, ASE, SVU, HRS, SCAI, and ACVP).
12.03	Discuss certification, licensure, credential, and registration for the Cardiovascular Technologist.
12.04	Describe the sub-specialty of Invasive cardiovascular technology (Cardiac Catheterization) and identify the duties of the Cardiovascular Invasive Specialist.
12.05	Describe the sub-specialty of and identify the duties of the Cardiovascular Technologist.
12.06	Describe the sub-specialty of adult echocardiography and identify the duties of the Cardiovascular Technologist.
12.07	Describe the sub-specialty of pediatric echocardiography and identify the duties of the Cardiovascular Technologist.
12.08	Describe the sub-specialty of Non-invasive Vascular technologist and identify the duties of the Cardiovascular Technologist.
12.09	Describe the sub-specialty of cardiac electrophysiology and identify the duties of the Cardiovascular Technologist.
13.0	Identify the anatomic structure and function of body systems in relation to cardiovascular disease and studies. The student will be able to:

	13.01 Describe human anatomy and physiology with emphasis on the cardiovascular systems.
	13.02 Discuss principles and methods of disease transmission and prevention.
	13.03 Identify normal and abnormal data obtained from medical tests.
	13.04 Describe basic acquired and congenital pathological conditions of the cardiovascular systems.
14.0	Demonstrate the ability to recognize normal and abnormal electrocardiogram (EKG) rhythms and arrhythmias as each apply to intra-procedural therapies. The student will be able to:
	14.01 Identify cardiac anatomy and the normal and abnormal electrical conduction pathways within the heart.
	14.02 Identify the inherent rates of each segment of the nodal pathway of the heart.
	14.03 Identify the components of a normal cardiac cycle including the hemodynamic, mechanical and electrical components.
	14.04 Associate the action potential and each electrical segment of the EKG cycle (P wave, PR interval, QRS complex, ST segment, T wave, isoelectric line) to the mechanical function of the heart.
	14.05 Explain how the PR interval and QRS complex are measured within the cardiac cycle.
	14.06 Identify sinus, atrial, junctional, supraventricular, and ventricular rhythms as well as heart blocks and paced rhythms.
	14.07 Correlate the clinical implications of arrhythmias to cardiac pathology.
	14.08 Differentiate artifact, interference, and noise versus arrhythmia.
	14.09 Identify the components of a 12-Lead EKG including appearance of infarct, ischemia and chamber enlargement.
15.0	Practice safety and quality assurance. The student will be able to:
	15.01 Apply acceptable safety practices in cardiovascular instrumentation per employer and OSHA standards.
	15.02 Demonstrate knowledge of radiation safety procedures.
	15.03 Demonstrate the practice of radiation safety procedures.
	15.04 Demonstrate knowledge of quality assurance as it relates to imaging equipment.
	15.05 Implement appropriate regulatory, institutional and department specific accreditation patient safety guidelines.
	15.06 Apply the knowledge of blood and air borne pathogens and the psychomotor skills to employ standard precautions and safe practices to reduce occupational exposure.
16.0	Follow professional principles related to the practice of cardiovascular technology. The student will be able to:

	16.01 Carry out all responsibilities in the best interest of the patient in an excellent manner.
	16.02 Carry out assigned tasks conscientiously, honestly, enthusiastically, and accept responsibility for the task and the results.
	16.03 Function effectively as part of a team-adaptable to change and willing to teach others.
	16.04 Abide by the rules and procedures of the work site.
	16.05 Maintain a hygienic, professional appearance.
	16.06 Demonstrate pride and loyalty to the profession.
17.0	Use basic medical electronics and medical instrumentation. The student will be able to:
	17.01 Identify the duties related to electronic monitoring and diagnostic testing of patient.
	17.02 Demonstrate computer literacy skills as applied to cardiovascular practice.
	17.03 Operate equipment used in diagnostic testing, physiological monitoring and interventional procedures for cardiovascular patients.
	17.04 Set up, calibrate, and operate selected equipment in the cardiovascular laboratory.
18.0	Describe the role of the cardiovascular technologist in catastrophic event management. The student will be able to:
	18.01 Follow institutional catastrophic event protocol.
	18.02 Respond to simulated emergency care situations encountered in a cardiovascular department.
	18.03 Identify the components of the defibrillator and how it is used.
	18.04 Cite the indications for cardiac defibrillation and cardioversion.
	18.05 Demonstrate working Knowledge of ACLS algorithms.
19.0	Discuss the pharmacological aspects of cardiovascular drugs. The student will be able to:
	19.01 State the mechanism of action of selected cardiovascular drugs.
	19.02 Identify and describe uses of pharmacological agents on an emergency "crash" cart.
	19.03 Use needles and syringes in preparing medications for administration in simulated practice.
20.0	Perform patient care, record patient history and practice effective communication. The student will be able to:
	20.01 Perform patient identification and time-out procedures.

20.02	Examine the patients chart and/or electronic medical record in order to locate pertinent information, when allowable.
20.03	Perform a patient history pertinent to the cardiovascular exam.
20.04	Practice patient care with emphasis on patient privacy, patient confidentiality, informed consent, body mechanics, patient positions and patient transportation.
20.05	Measure vital signs and differentiate between normal and abnormal values.
20.06	Cite the indications for and name the methods of oxygen administration.
20.07	Recognize human behaviors indicative of anxiety.
20.08	Identify and develop effective communication and interpersonal relations skills with patients, family, and colleagues.
20.09	Discuss approaches used in dealing with a variety of hospitalized persons.
20.10	Describe socio-cultural traits which may affect a person's hospital care.
One of the following sub-specialties must be added to the intended outcomes for Cardiovascular. Additional sub-specialties may be included, as desired. ****For those programs which include the invasive cardiovascular sub-specialty, the following student performance standards are necessary:**	
21.0	Assist in all aspects of invasive cardiovascular diagnostic and interventional procedures and techniques with emphasis on cardiovascular catheterization. The student will be able to:
21.01	Describe the history of invasive cardiovascular procedures, including pioneers in the field.
21.02	Practice sterile technique as it applies to the cardiovascular catheterization set up and protocols for cardiovascular catheterization procedures.
21.03	Demonstrate the knowledge diagnostic left heart, right heart and vascular catheterization set up, protocols and procedures.
21.04	Apply communication skills and procedure knowledge in patient education pre, during and post procedure.
21.05	Perform diagnostic left heart, right heart and vascular catheterization set up, protocols, and procedures.
21.06	Demonstrate the knowledge of diagnostic procedures in the cath lab including but not limited to angiography, intravascular and intracardiac imaging (e.g., Intravascular Ultrasound (IVUS), Optical Coherence tomography (OCT), Intracardiac echocardiography (ICE), functional assessment of coronary artery disease (e.g., Instantaneous wave-free ratio (iFR), Fractional Flow Reserve (FFR), and cardiac biopsies)
21.07	Demonstrate the knowledge of interventional procedures in the cath lab including, but not limited to, angioplasty, stent implantation, thrombectomy, mechanical circulatory support devices,, valvuloplasty, pericardiocentesis, atherectomy, vena cava filters, LVADs, and structural heart procedures.

21.08	Describe catheter insertion techniques and assist physician with manipulation of catheterization equipment and instruments during the procedures.
21.09	Recognize cardiovascular anatomy through angiography and assess cardiovascular status from the data.
21.10	Recognize and interpret cardiovascular hemodynamic parameters and record and measure left and right heart and vascular pressures.
21.11	Determine cardiac output and cardiac index by Fick equation, thermodilution technique and angiographic technique and perform Hemodynamic calculations.
21.12	Perform calculations which include, but are not limited to, mean arterial pressure, ejection fraction regurgitation fraction, valve area using Gorlin formula and pulmonary and systemic vascular resistances.
21.13	Recognize presence of shunts by oximetry and perform shunt calculations.
21.14	Discuss permanent and temporary pacemaker protocols.
21.15	Correlate and calculate necessary data from right and left heart and vascular catheterization and assess the cardiovascular status from this information.
21.16	Demonstrate acceptable post-Cath care of the patient and catheterization access.
21.17	Identify complications which occur during cardiovascular catheterization procedures and describe treatment options.
21.18	Describe and perform venipuncture to initiate intravenous fluid therapy on a venipuncture model, where applicable. (Optional)
21.19	Maintain and troubleshoot existing intravenous/intra-arterial lines, where applicable. (Optional)
21.20	Demonstrate knowledge of basic x-ray history, theory, production, radiation biology and protection.
21.21	Demonstrate knowledge of patient assessment and practice patient care of the invasive Cardiovascular patient, including but not limited to basic assessment, history and physical, vital signs, lab values, CNS assessment, CVS assessment, peripheral vascular assessment etc.
21.22	Demonstrate the knowledge associated with cardiovascular catheterization procedures, including but not limited to Pre and post-cardiovascular catheterization patient care, monitoring and recording, manipulation of imaging equipment, image acquisition quality control, scrubbing, and circulating.
21.23	Perform the psychomotor clinical skills associated with cardiovascular catheterization procedures, including but not limited to Pre and post-cardiovascular catheterization patient care, monitoring and recording, manipulation of imaging equipment, image acquisition quality control, scrubbing, and circulating.
21.24	Demonstrate knowledge of the pharmacologic principles and medications required to function in the cardiovascular Cath labs including pharmacology calculations and IV fluid therapy.
21.25	Administer medications during cardiovascular catheterization procedures under the direction of the physician.
21.26	Demonstrate knowledge and skills of ACLS protocols.
21.27	Demonstrate knowledge of the congenital and acquired cardiovascular diseases and their treatments found in cardiovascular

	patients.
21.28	Discuss the main components of the coagulation cascade, how different pathology and pharmacological agents affect the process, and how manual, mechanical, and vascular closure devices are related to post-op hemostasis.
21.29	Demonstrate knowledge of patient preparation, sterile technique, instrumentation, and basic device function for PPM and ICD procedures.
****For those programs which include the adult echocardiography sub-specialty, these student performance standards are necessary:**	
22.0	Perform noninvasive cardiovascular techniques with an emphasis on echocardiography. The student will be able to:
22.01	Relate normal and abnormal heart sounds to specific cardiac pathology.
22.02	Assist in performance of stress electrocardiography and explain indications, contraindications, and positive and negative test results.
22.03	Assist in performance of ambulatory electrocardiography, explain indications, and test results.
22.04	Describe the physics of ultrasound as it applies to echocardiography and cardiac Doppler.
22.05	Demonstrate function and use of noninvasive cardiology equipment.
22.06	Perform, measure and analyze M-Mode and Two-Dimensional echocardiograms.
22.07	Perform, measure and analyze Color Flow Doppler exams.
22.08	Perform, measure, and analyze interventional spectral Doppler echocardiography.
22.09	Demonstrate knowledge of pathophysiology of cardiovascular diseases as seen on echocardiography.
22.10	Perform and demonstrate knowledge of information derived from echocardiography, including but not limited to measurements, normal parameters and equations.
22.11	Demonstrate knowledge of patient assessment, and practice patient care of the cardiac patient.
22.12	Perform and demonstrate knowledge of non-invasive modalities and advance techniques, including but not limited to stress echo, effects of medication, normal/abnormal findings, holter monitoring, stress testing, transesophageal echocardiogram, 3D echocardiograms, contrast agents and provocation maneuvers.
****For those programs which include the noninvasive vascular technology sub-specialty, the following student performance standards are necessary:**	
23.0	Perform noninvasive peripheral vascular studies. The student will be able to:
23.01	Discuss the physics of ultrasound as it applies to Sonography imaging and Doppler, including but not limited to definition of sound, propagation of sound in tissue, Transducers and ultrasound imaging (B, & M mode), artifacts and risks of bioeffects.
23.02	Discuss the physical principles and instrumentation as it applies to tissue perfusion, including but not limited to general physics and laws of hemodynamics, tissue mechanics and pressure transmission, and plethysmography.

23.03	Discuss normal vascular anatomy.
23.04	Interpret normal vascular ultrasonic anatomy.
23.05	Describe patient positioning with respect to vascular modalities.
23.06	Demonstrate knowledge of assessment and care of the cardiovascular patient.
23.07	Discuss circulatory hemodynamics as it applies to arterial, venous and cerebral hemodynamics.
23.08	Perform arterial patient physical assessment.
23.09	Perform venous patient physical assessment.
23.10	Perform cerebrovascular patient physical assessment.
23.11	Perform noninvasive peripheral vascular evaluations, including venous, arterial, visceral and cerebral vascular studies.
23.12	Discuss therapeutic intervention as it relates to arterial, venous, visceral and cerebrovascular studies.
23.13	Describe test validation and measurements as they relate to vascular studies.
23.14	Demonstrate a knowledge of the pathophysiology and etiology of diseases of the circulatory system, including venous, arterial, visceral and cerebrovascular diseases.
23.15	Discuss appropriate action based on data interpretation.
****For those programs which include the pediatric echocardiography sub-specialty, these student performance standards are necessary:**	
24.0	Perform noninvasive cardiovascular techniques with an emphasis on echocardiography related to the pediatric patient. The student will be able to:
24.01	Demonstrate knowledge of indication for echocardiogram and obtain information required for diagnosis and treatment of the pediatric patient.
24.02	Describe the physics of ultrasound as it applies to echocardiography and cardiac Doppler.
24.03	Demonstrate function and safe use of cardiac ultrasound equipment.
24.04	Demonstrate ability to acquire diagnostic images and utilization of proper display orientation.
24.05	Perform, measure and analyze M-Mode and Two-Dimensional echocardiograms.
24.06	Perform, measure, and analyze Color Flow Doppler exams.
24.07	Perform, measure, and analyze spectral Doppler and recognize application for assessment of blood flow and prediction of intracardiac pressures.

24.08	Demonstrate knowledge of cardiac cycles and related hemodynamics.
24.09	Demonstrate knowledge of embryology, congenital heart diseases and acquired heart diseases.
24.10	Demonstrate knowledge of pathophysiology of cardiovascular diseases as seen on echocardiography.
24.11	Demonstrate knowledge of cardiac surgeries, allografts, interventional procedures and sequelae.
24.12	Perform and demonstrate knowledge of information derived from echocardiography, including but not limited to measurements, normal parameters and equations.
24.13	Demonstrate knowledge of limitations of echocardiography and Doppler techniques.
24.14	Demonstrate knowledge of patient assessment and practice patient care of the pediatric cardiac patient.
24.15	Perform and demonstrate knowledge of advanced techniques, including but not limited to stress echo, effects of medication, normal/abnormal findings, stress testing, transesophageal echocardiogram, intra cardiac echo, 3D echo and contrast agents and provocation maneuvers.
****For those programs which include the invasive cardiac electrophysiology sub-specialty, the following student performance standards are necessary:**	
25.0	Assist in all aspects of cardiovascular electrophysiology procedure. – The student will be able to:
25.01	Describe the physiology of and indications for diagnostic and interventional EP procedures including, but not limited to, ventricular stimulation, syncope study, EP studies cardiac implantable electronic devices, venous angiography, Percutaneous Transvenous Angioplasty (PTVA) ablations, external cardioversion, internal cardioversion, pericardiocentesis, lead extraction and laser lead extraction.
25.02	Identify the complications associated with electrophysiology studies and internal cardiac device implants and describe emergency interventions.
25.03	Demonstrate knowledge and skills of ACLS protocols.
25.04	Demonstrate knowledge of and practice pre and post patient care for the patient undergoing diagnostic/interventional electrophysiology study and internal cardiac device implant to include review of history and physical, vital signs, lab values, medications and peripheral vascular assessment.
25.05	Identify diagnostic and interventional catheters, their use, and how they could be configured for EGM acquisition.
25.06	Describe catheter insertion techniques for manipulation of temporary & permanent pacing and interventional catheters.
25.07	Practice sterile technique as it applies to the preparation of self and patients for electrophysiology procedures and internal cardiac device implants.
25.08	Perform patient and sterile table set up for diagnostic and interventional ventricular, syncope and SVT electrophysiology procedures and internal cardiac device implants.
25.09	Perform as a scrub and record technologist assisting physicians with diagnostic and interventional EP procedures. EP procedures including, but not limited to, ventricular stimulation, syncope study, EP studies, cardiac implantable electronic

	devices, venous angiography, Percutaneous Transvenous Angioplasty (PTVA), ablations, external cardioversion, internal cardioversion, pericardiocentesis, lead extraction and laser lead extraction.
25.10	Identify and properly utilize surgical instruments while assisting with cardiac implantable electronic devices.
25.11	Identify the ionic properties of the cardiac action potential and the changes to the action potential associated with abnormal values.
25.12	Identify the normal refractory periods of the nodes and tissue and describe the effects that antiarrhythmics may have on them.
25.13	Identify intra-cardiac electrograms from the right and left atrium, at the AV node, bundle of His, right and left ventricles and in the coronary sinus.
25.14	Identify and describe the mechanism and perform differential diagnosis of cardiac arrhythmias including, but not limited to, ventricular tachycardia, AV nodal reentrant tachycardia, AV reentrant tachycardia, atrial flutter and atrial fibrillation.
25.15	Perform stimulation protocols and identify pharmacology used for induction, termination, and differential diagnosis of arrhythmias, including but not limited to, ventricular tachycardia's (ischemic, RVOT-VT, idiopathic LV VT & BBRT), AV nodal reentrant tachycardia, AV reentrant tachycardia, atrial flutter and atrial fibrillation.
25.16	Demonstrate knowledge of the pharmacologic principles and medications used for the care of patients in the cardiac electrophysiology lab.
25.17	Demonstrate knowledge of differential diagnosis techniques and treatment of congenital arrhythmias, including but not limited to, Brugada Syndrome, Long QT syndrome, Arrhythmogenic Right Ventricular Dysplasia and Wolf-Parkinson-White.
25.18	Identify the coronary venous system utilizing radiographic and angiographic imaging.
25.19	Identify venous and arterial hemodynamic waveforms while performing trans-septal puncture and respond appropriately to recognized data.
25.20	Perform in the record role, demonstrating knowledge of acquisition and evaluation of data, stimulator operations, and provide differential diagnosis of arrhythmias during electrophysiology and internal cardiac device procedures.
25.21	Demonstrate the ability to perform basic internal cardiac device programmer operations, including interrogation, diagnostic information retrieval, pacing & sensing thresholds, and emergency pacing.
25.22	Analyze diagnostic data and results of functional testing retrieved from pacemakers and internal cardiac devices.
25.23	Demonstrate appropriate post-procedure care for venous/arterial access sites and/or electrophysiology procedures or Cardiac implantable electronic devices.
25.24	Demonstrate knowledge of basic x-ray history, theory, production, biology, and patient/employee safety.
25.25	Demonstrate critical behaviors and knowledge of quality control while manipulating imaging equipment, and providing image acquisition during diagnostic/interventional electrophysiology procedures and internal cardiac device implants.
25.26	Identify mapping technologies and theories currently used in ablation procedures: To include impedance based, hybrid and electromagnetically derived systems. Mapping theories such as anatomical, activation, high definition, voltage, isochronal, and CFE.
25.27	Identify the difference between bipolar and unipolar electrograms, including current filtering utilization.

25.28	Demonstrate basic knowledge of ICE (Intracardiac echocardiography) applications currently used during electrophysiology procedures.
25.29	Demonstrate knowledge of procedural focused aspects of the transseptal procedure used in EP labs. Including but limited to: Anatomical locations, equipment currently used, complications, indications, monitoring and scrub duties.

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as, experimental, quality, and safety procedures are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate and troubleshoot equipment/tools used to make observations. Students understand measurement error; and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

Special Notes

Basic preparation in English, Mathematics, and the Sciences are recommended prior to entering the Cardiovascular/Cardiopulmonary professional component of the curriculum. The following courses with an (*) marking those thought to be essential. (Prerequisite courses required to complete the program must be included in the listed program length credits.

_ English - Composition*
_ Communications - Speech
_ Electronic
_ Oral Biology
_ Anatomy & Physiology - General*
_ Math - Algebra *
_ Chemistry*
_ Physics*
_ Microbiology
_ Psychology - Social Skills
_ Computers (health informatics)
_ Keyboarding
_ Word processing
_ Hardware & systems
_ Software
_ Humanities - as required for graduation

Cardiovascular/cardiopulmonary technology educational programs will address one or more of the five basic sub-specialties: 1) invasive cardiovascular technology, 2) adult echocardiography) pediatric echocardiography, 4) noninvasive vascular study and 5) cardiac electrophysiology. Cardiopulmonary technology should include the additional component of pulmonary function testing. The Cardiovascular/Cardiopulmonary Technology Program may award an Associate of Applied Science (AAS) and/or Associate of Science (AS) degree within the program length guidelines. When the cardiovascular program competencies are offered, the program cannot exceed 77 credit hours.

This program meets the Department of Health's education requirements for HIV/AIDS, Domestic Violence and Prevention of Medical Errors. Although not a requirement for initial licensure, it is a requirement for renewal; therefore, the instructor **may** provide a certificate for renewal purposes to the student verifying these requirements have been met.

The program should meet the requirements of the American Medical Association and Commission on Accreditation of Allied Health Education Programs (CAAHEP), 1361 Park Street, Clearwater, Florida 33756, Phone: 727-210-2350, Fax: 727-210-2354 www.CAAHEP.org.

Graduates should be prepared to take the appropriate registry and/or state licensure examinations.

The Core should be taken first in the program. Following the successful completion of the core, the student is eligible to take the National Health Care Foundation Skill Standards Assessment with instructor approval and the completion of a portfolio.

General Education Course Requirements for AS and AAS Degrees

State Board of Education Rule 6A-14.030(4), F.A.C., identifies 15 credit hours as the minimum amount of general education coursework required in the Associate of Science (AS) degree and the Associate of Applied Science (AAS) degree. In addition, Rule 6A-14.0303, F.A.C., implements s. 1007.25, F.S., and requires students entering a technical education degree program in the 2022-2023 academic year, and thereafter, to complete at least one identified core course in each subject area as part of the general education course requirements (15 credit hours total) before a degree is awarded) The core subject areas include:

- Communication.
- Humanities.
- Mathematics.
- Natural Sciences.
- Social Sciences.

Career and Technical Student Organization (CTSO)

CTSOs are co-curricular career and technical student organizations providing leadership training and reinforcing specific career and technical skills. Career and Technical Student Organizations provide activities for students as an integral part of the instruction offered. Other CTSOs not listed in this curriculum framework or recognized by the Florida Department of Education are permissible provided they support student mastery over the standards and benchmarks of this curriculum framework.

Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

Florida Department of Education
Curriculum Framework

Program Title: **Emergency Medical Services**
Career Cluster: **Health Science**

Associate in Science	
CIP Number	1351090402
Program Type	College Credit
Program Length	73 credit hours
CTSO	HOSA
SOC Codes (all applicable)	For program SOC codes, please see the Program and Course Tables section of the CTE Program Resources page linked below.
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml

Purpose

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Health Science career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of Health Science career cluster.

The content includes but is not limited to all those objectives identified in the current U S Department of Transportation, National EMS Education Standards for both the EMT and Paramedic.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Program Structure

This program is a planned sequence of instruction consisting of 73 credit hours.

When developing the course sequence for the local implementation of this program, select courses that:

- Meet the skill development requirements of the standards and benchmarks of this program.
- Meet the general education core course requirements of Rule 6A-14.0303, Florida Administrative Code.
- Where reasonable and practicable, align with programs offered by your institution or other postsecondary institutions in Florida, including:
    - Related CCC and ATD credentials.

- Baccalaureate degrees within the same career pathway and/or Federal CIP code.

Visit FloridaShines' Discover Programs website to identify other institutions that offer similar programs to review their course sequencing. Where appropriate, course alignment between institutions offering related programs can facilitate interagency student articulation.

Visit FloridaShines' Common Prerequisites Manual to identify courses that are prerequisites for admission into an upper division program. When sub-baccalaureate courses are aligned to the course admissions requirements of baccalaureate programs with the same career pathway, students can enter upper division coursework seamlessly.

Regulated Programs

The recommended instructor-student ratio may not exceed 1:6 pursuant to 401.1201, F.S. Clinical activity shall include appropriate patient assessment skills, intervention and documentation relevant to each clinical rotation.

This program meets the Department of Health trauma score card methodologies and Sudden Unexpected Infant Death Syndrome (SUIDS) training education requirements. Upon completion of this program, the instructor will provide a certificate to the student verifying that these requirements have been met. This program also meets the Department of Health's education requirements for HIV/AIDS, Domestic Violence and Prevention of Medical Errors. Although not a requirement for initial licensure, it is a requirement for renewal, therefore the instructor **may** provide a certificate for renewal purposes to the student verifying these requirements have been met.

Management practicum shall be provided in an agency which will provide the student with the opportunity to observe and practice the learning objectives.

All students must satisfy the requirements of both the EMT and Paramedic certificates prior to completion of the associate's degree.

The medical procedures performed by a Paramedic must be performed under the direction of a licensed physician with appropriate emergency experience according to Chapter 64J, Florida Administrative Code (F.A.C.).

It is strongly recommended this program be accredited by Commission on Accreditation of Allied Health Education Programs (CAAHEP). Beginning January 1, 2013, National Registry for Emergency Medical Technicians (NREMT) will require students applying for Paramedic National certification to be from a CAAHEP/CoAEMSP accredited program.

"All EMR/EMT/Paramedic students are required to complete the 4-hour Traffic Incident Management Safety (TIMS) course at least once. This requirement can be fulfilled either as a prerequisite or as part of the curriculum, at the discretion of the EMS education program."

"It is highly recommended, though not mandatory, that courses in medical terminology, anatomy, and pharmacology be completed before enrolling in EMT and Paramedic training."

Florida's Career Readiness Skills for CTE Programs

Employability Skills	
01.0	Apply academic skills to workplace scenarios.
01.01	Use reading skills.
01.02	Use writing skills.
01.03	Use mathematical strategies and procedures.
01.04	Use scientific principles and procedures.
02.0	Design a solution to an industry problem.
02.01	Use critical thinking.
02.02	Use creativity.
02.03	Make sound decisions.
02.04	Solve problems.
02.05	Reason.
02.06	Plan and organize.
03.0	Manage resources within an industry project
03.01	Manage time.
03.02	Manage money or resources.
03.03	Manage materials.
03.04	Manage personnel.
04.0	Oversee the subcomponents, operations and output of a technical or organizational system.
04.01	Manage systems.
04.02	Monitor systems.
04.03	Improve systems.
05.0	Use information for decision making.
05.01	Locate information.
05.02	Organize information.
05.03	Use information.

	05.04 Analyze information.
	05.05 Communicate information.
06.0	Apply relevant technology to workplace scenarios to aid productivity.
	06.01 Use technology.
07.0	Interpret and express interpersonal communication.
	07.01 Communicate verbally.
	07.02 Listen actively.
	07.03 Comprehend written material.
	07.04 Convey information in writing.
	07.05 Communicate nonverbally.
	07.06 Interpret nonverbal communication.
08.0	Interact with others to accomplish workplace goals.
	08.01 Collaborate with others in a team.
	08.02 Respond to customer needs.
	08.03 Exercise leadership.
	08.04 Negotiate to resolve conflict.
	08.05 Respect others.
09.0	Manage personal behavior to maximize productivity and professional growth.
	09.01 Demonstrate responsibility and self-discipline.
	09.02 Adapt and show flexibility.
	09.03 Work independently.
	09.04 Demonstrate a willingness to learn.
	09.05 Demonstrate integrity.
	09.06 Demonstrate professionalism.
	09.07 Take initiative.
	09.08 Display positive attitude.
	09.09 Take responsibility for professional growth.

Job Attainment	
10.0	Find, assess and apply to job opportunities.
10.01	Identify online job posts relevant to his or her career aspirations.
10.02	Compare and contrast the job posts' required qualifications, job duties, compensation, benefits and employers.
10.03	Define what information, documentation and writing prompts are required for the positions.
11.0	Communicate personal competence, character and fit for a job opportunity.
11.01	Develop a resume.
11.02	Write a cover letter.
11.03	Curate a professional portfolio that includes work products.
11.04	Prepare for and experience a mock job interview.
12.0	Cultivate and leverage relationships to professionally advance.
12.01	Request a signed reference letter, letter of recommendation and/or an online skill/professionalism endorsement.
12.02	Develop a plan to cultivate a professional digital footprint.
12.03	Develop a networking plan for a specific industry of interest.

Standards

After successfully completing this program, the student will be able to perform the following:

EMT: Completion of intended outcomes 01-62 lead to the student's eligibility to sit for the licensure exam for EMT.

01.0 Demonstrate a simple depth, foundational breadth of knowledge of EMS systems.
02.0 Demonstrate a simple depth, simple breadth of knowledge of research and evidence-based decision making.
03.0 Demonstrate a fundamental depth, foundational breadth of knowledge of workforce safety and wellness.
04.0 Demonstrate a fundamental depth, foundational breadth of knowledge of the principles of medical documentation and report writing.
05.0 Demonstrate a simple depth, simple breadth of knowledge of the EMS communication system, communication with other health care professionals, and team communication.
06.0 Demonstrate a simple depth, simple breadth of knowledge of the principles of therapeutic communication.
07.0 Demonstrate a fundamental depth, foundational breadth of knowledge of medical legality and ethics.
08.0 Demonstrate a fundamental knowledge of the anatomy and function of all human systems to the practice of EMS.
09.0 Demonstrate a fundamental knowledge in the use of medical terminology.
10.0 Demonstrate a fundamental knowledge of the causes and pathophysiology of shock and the components of resuscitation.
11.0 Demonstrate a fundamental knowledge of life span development to patient assessment and management.
12.0 Demonstrate a simple knowledge of the principles of illness and injury prevention in emergency care.
13.0 Demonstrate a simple depth, simple breadth of knowledge of pharmacology, medication safety, and medication types used during an emergency.
14.0 Demonstrate a fundamental depth, simple breadth of knowledge of emergency medications within the scope of practice of the EMT.
15.0 Demonstrate a fundamental depth, foundational breadth of knowledge of respiration
16.0 Demonstrate a fundamental depth, foundational breadth of knowledge of airway management patients of all ages within the scope of practice of the EMT.
17.0 Demonstrate a fundamental depth, foundational breadth of knowledge of assessment and management utilizing ventilation, patients of all ages.
18.0 Demonstrate a fundamental depth, foundational breadth of knowledge of scene management and multiple patient situations.
19.0 Demonstrate a fundamental depth, simple breadth of knowledge of the primary assessment for all patient situations.
20.0 Demonstrate a fundamental depth, foundational breadth of knowledge of the components of history taking.
21.0 Demonstrate a fundamental depth, foundational breadth of knowledge of techniques used for a secondary assessment.
22.0 Demonstrate a simple depth, simple breath of knowledge of monitoring devices within the scope of practice of the EMT.
23.0 Demonstrate a fundamental depth, foundational breadth of knowledge of how and when to perform a reassessment for all patient situations.
24.0 Demonstrate a simple depth, foundation breadth of knowledge of pathophysiology, assessment and management of medical complaints.
25.0 Demonstrate a fundamental depth, foundational breadth of knowledge of the assessment and management of neurologic disorders/emergencies, patients of all ages.
26.0 Demonstrate a fundamental depth, foundational breadth of knowledge of the assessment and management of abdominal and gastrointestinal disorders/emergencies, patients of all ages.
27.0 Demonstrate a fundamental depth, foundational breadth of knowledge of the assessment and management of immunology disorders/emergencies, patients of all ages.

28.0 Demonstrate a simple depth, simple breadth of knowledge of the assessment and management of a patient who may have an infectious disease, patient of all ages.
29.0 Demonstrate a fundamental depth, foundational breadth of knowledge of the assessment and management of endocrine disorders/emergencies, patients of all ages.
30.0 Demonstrate a fundamental depth, foundational breadth of knowledge regarding the assessment and management of psychiatric emergencies, patients of all ages.
31.0 Demonstrate a fundamental depth, foundational breadth of knowledge of the assessment and management of cardiovascular emergencies, patients of all ages.
32.0 Demonstrate a fundamental depth, foundational breadth of knowledge of the assessment and management of toxicological (poisoning and overdose) emergencies, patients of all ages.
33.0 Demonstrate a fundamental depth, foundational breadth of knowledge of the assessment and management of respiratory disorders/emergencies, patients of all ages.
34.0 Demonstrate a simple depth, simple breadth of knowledge of the assessment, and management of hematology disorders, patients of all ages.
35.0 Demonstrate a simple in-depth, simple breath of knowledge of the assessment and management of genitourinary/ renal emergencies, patients of all ages.
36.0 Demonstrate a fundamental depth, foundational breadth of knowledge of the assessment and management of gynecologic emergencies, patients of all ages.
37.0 Demonstrate a fundamental depth, foundational breadth of knowledge of the assessment and management of non-traumatic fractures, patients of all ages.
38.0 Demonstrate a simple depth, simple breadth of knowledge of assessment and management of diseases of the eyes, ears, nose, and throat, patients of all ages.
39.0 Demonstrate a fundamental knowledge of the causes, pathophysiology, and management of shock and respiratory failure, patients of all ages
40.0 Demonstrate a fundamental depth, foundational breadth of knowledge of pathophysiology, assessment, and management of trauma, patients of all ages.
41.0 Demonstrate a fundamental depth, foundational breadth of knowledge of pathophysiology, assessment, and management of bleeding, patients of all ages.
42.0 Demonstrate a fundamental depth, simple breadth of knowledge of pathophysiology, assessment, and management of chest trauma, patients of all ages
43.0 Demonstrate a fundamental depth, simple breadth of knowledge of pathophysiology, assessment, and management of abdominal and genitourinary trauma, patients of all ages.
44.0 Demonstrate a fundamental depth, foundational breadth of knowledge of pathophysiology, assessment, and management of orthopedic, trauma patients of all ages.
45.0 Demonstrate a fundamental depth, foundational breadth of knowledge of pathophysiology, assessment, and management of soft tissue trauma, patients of all ages.
46.0 Demonstrate a fundamental depth, foundational breadth of knowledge of pathophysiology, assessment, and management of head, facial, neck, and spine trauma, patients of all ages.
47.0 Demonstrate a fundamental depth, foundational breadth of knowledge of pathophysiology, assessment, and management of nervous system trauma, patients of all ages

48.0 Demonstrate a fundamental depth, foundational breadth of knowledge of pathophysiology, assessment, and management of trauma patients with special considerations, patients of all ages.
49.0 Demonstrate a fundamental depth, foundational breadth of knowledge of pathophysiology, assessment, and management of environmental emergencies, patients of all ages.
50.0 Demonstrate a fundamental depth, foundational breadth of knowledge of pathophysiology, assessment, and management of multi-system trauma and blast injuries, patients of all ages.
51.0 Demonstrate a fundamental depth, foundational breadth of knowledge of management of the obstetric patient within the scope of practice of the EMT.
52.0 Demonstrate a fundamental depth, foundational breadth of knowledge of management of the newborn and neonatal patient within the scope of practice of the EMT.
53.0 Demonstrate a fundamental depth, fundamental breath of knowledge of management of the pediatric patient within the scope of practice of the EMT.
54.0 Demonstrate a fundamental depth, foundational breadth of knowledge of management of the geriatric patient within the scope of practice of the EMT.
55.0 Demonstrate a simple depth, simple breadth of knowledge of management of the patient with special challenges patients of all ages.
56.0 Demonstrate a simple depth, foundational breadth of knowledge of risks and responsibilities of transport.
57.0 Demonstrate a fundamental depth, fundamental breadth of knowledge of establishing and working within the incident management system.
58.0 Demonstrate a simple depth, foundational breadth of knowledge of responding to an emergency during a multiple casualty incident.
59.0 Demonstrate a simple depth, simple breadth of knowledge of safe air medical operations and criteria for utilizing air medical response.
60.0 Demonstrate a simple depth, simple breadth of knowledge for safe vehicle extrication and use of simple hand tools.
61.0 Demonstrate a simple depth, simple breadth of knowledge of risks and responsibilities of operating in a cold zone at a hazardous material or other special incident.
62.0 Demonstrate a simple depth, simple breadth of knowledge of risks and responsibilities of operating on the scene of a natural or man-made disaster.

Paramedic: Completion of intended (outcomes 63-127) lead to the student's eligibility to sit for the licensure exam for Paramedic.

63.0 Demonstrate a fundamental depth, foundational breadth of knowledge of the History of EMS and a complex depth, comprehensive breadth of knowledge of EMS Systems.
64.0 Demonstrate a fundamental depth, foundational breath of knowledge of research principles to interpret literature and advocate evidence-based practice.
65.0 Demonstrate a complex depth, comprehensive breadth of knowledge of workforce safety and wellness.
66.0 Demonstrate a complex depth, comprehensive breadth of knowledge of the principles of medical documentation and report writing.
67.0 Demonstrate a complex depth, comprehensive breadth of knowledge of EMS communication system.
68.0 Demonstrate a complex depth, comprehensive breadth of knowledge of the therapeutic communication principles.
69.0 Demonstrate a complex depth, comprehensive breadth of knowledge of medical legal and ethical concepts related to EMS.
70.0 Integrate a comprehensive knowledge of anatomy and physiology of all human systems.
71.0 Integrate a comprehensive knowledge in the use of medical terminology and abbreviations into written and oral communication with health care professionals.
72.0 Demonstrate a complex knowledge of pathophysiology of major systems.
73.0 Integrate the knowledge of the physiological and sociological changes throughout human development.

74.0 Demonstrate a fundamental knowledge of the principles of public health.
75.0 Demonstrate a complex depth, comprehensive breadth of knowledge in the principles of pharmacology.
76.0 Demonstrate a complex depth, comprehensive breadth of knowledge of medication administration within the scope of practice of the paramedic.
77.0 Demonstrate a complex depth, comprehensive breadth of knowledge of emergency medications within the scope of practice for the paramedic.
78.0 Demonstrate a complex depth, comprehensive breadth of knowledge of airway management within the scope of practice of paramedic, patients of all ages.
79.0 Demonstrate a complex depth, comprehensive breadth of knowledge of respiration within the scope of practice of paramedic, patients of all ages.
80.0 Demonstrate a complex breadth, comprehensive breadth of knowledge of ventilator assessment and management, patients of all ages.
81.0 Demonstrate a complex depth, comprehensive breadth of knowledge of scene management.
82.0 Demonstrate a complex depth, comprehensive breadth of knowledge of the primary assessment for all patient situations.
83.0 Demonstrate a complex depth, comprehensive breath of knowledge of the components of history taking.
84.0 Demonstrate a complex depth, comprehensive breadth of knowledge of techniques used for a secondary assessment, patients of all ages.
85.0 Demonstrate a fundamental depth, foundational breadth of knowledge of monitoring devices within the scope of practice of the paramedic.
86.0 Demonstrate a complex depth, comprehensive breadth of knowledge of how and when to perform a reassessment for all patient situations.
87.0 Demonstrate a complex depth, comprehensive breadth of knowledge of pathophysiology, assessment, and management of medical complaints.
88.0 Demonstrate a complex depth, comprehensive breadth of knowledge of neurologic disorders/emergencies, patients of all ages.
89.0 Demonstrate a complex depth, comprehensive breadth of knowledge of abdominal and gastrointestinal disorders/emergencies, patients of all ages.
90.0 Demonstrate a complex depth, comprehensive breadth of knowledge of immunology disorders/emergencies, patients of all ages.
91.0 Demonstrate a complex depth, comprehensive breadth of knowledge of assessment and management of a patient who may have an infectious disease, patient of all ages.
92.0 Demonstrate a complex depth, comprehensive breadth of knowledge in endocrine disorders/emergencies, patients of all ages.
93.0 Demonstrate a complex depth, comprehensive breadth of knowledge regarding the assessment and management of psychiatric disorders/emergencies, patients of all ages.
94.0 Demonstrate a complex depth, comprehensive breadth of knowledge of cardiovascular disorders/ emergencies, patients of all ages.
95.0 Demonstrate a complex depth, comprehensive breadth of knowledge of the assessment and management of toxicology emergencies including psychosocial aspects of age-related assessment and treatment modifications for the major or common diseases and patients of all ages.
96.0 Demonstrate a complex depth, comprehensive breadth of knowledge of the assessment and management of respiratory disorders include psychosocial aspects of age-related assessment and treatment modifications for the major or common diseases and/ or emergencies associated with emergencies, patients of all ages.
97.0 Demonstrate a complex depth, foundational breadth of knowledge of the assessment and management of hematology disorders/ emergencies, patients of all ages.
98.0 Demonstrate a complex depth, comprehensive breadth of knowledge of genitourinary and renal emergencies to include psychosocial aspects of age-related assessment and treatment modifications for the major or common diseases and/or emergencies, patients of all ages
99.0 Demonstrate a complex depth, comprehensive breadth of knowledge of the assessment findings and the management of gynecology disorders Include psychosocial aspects of age-related assessment and treatment modifications for the major or common diseases and/or /emergencies, patients of all ages.

100.0 Demonstrate a fundamental depth, foundation breadth of knowledge of the assessment and management of non-traumatic fractures, patients of all ages
101.0 Demonstrate a fundamental depth, foundational breadth of knowledge of the assessment and management of common or major diseases of the eyes, ears, nose, and throat, patients of all ages
102.0 Demonstrate the integration of a comprehensive knowledge of causes and pathophysiology into the management of shock (Include psychosocial aspects of age- related assessment and treatment modifications for pediatric and geriatric patients).
103.0 Demonstrate the integration of a comprehensive knowledge of causes and pathophysiology into the management of cardiac arrest and respiratory failure (Include psychosocial aspects of age- related assessment and treatment modifications for pediatric and geriatric patients).
104.0 Demonstrate a complex depth, comprehensive breadth of knowledge of pathophysiology, assessment and management of the trauma, patient patients of all ages
105.0 Demonstrate a complex depth, comprehension breadth of knowledge of pathophysiology, assessment and management of bleeding, patients of all ages
106.0 Demonstrate a complex depth, comprehensive breadth of knowledge of pathophysiology, assessment, and management of chest trauma, patients of all ages
107.0 Demonstrate a complex depth, comprehensive breadth of knowledge of pathophysiology, assessment, and management of abdominal and genitourinary trauma, patients of all ages
108.0 Demonstrate a fundamental depth, foundational breadth of knowledge of pathophysiology, assessment, and management of orthopedic trauma, patients of all ages
109.0 Demonstrate a complex depth, comprehensive breadth of knowledge of pathophysiology, assessment, and management of soft tissue trauma, patients of all ages. (Include psychosocial aspects of age- related assessment and treatment modifications for pediatric and geriatric patients).
110.0 Demonstrate a fundamental depth, foundational breadth of knowledge of head, face, neck, and spine trauma, patients of all ages.
111.0 Demonstrate a fundamental depth, foundational breadth of knowledge of nervous system trauma, patients of all ages.
112.0 Demonstrate a complex depth, comprehensive breadth of knowledge of special considerations in trauma, patients of all ages.
113.0 Demonstrate a complex depth, comprehensive breadth of knowledge of environmental emergencies, patients of all ages
114.0 Demonstrate a complex depth, comprehensive breadth of knowledge of multi-system trauma and blast injuries.
115.0 Demonstrate a complex depth, comprehensive breadth of knowledge of multi-system trauma and blast injuries.
116.0 Demonstrate a complex depth, comprehensive breadth of knowledge of the management of the obstetric patient within the scope of practice of the paramedic.
117.0 Demonstrate a complex depth, comprehensive breadth of knowledge of the management of the neonatal patient within the scope of practice of the paramedic.
118.0 Demonstrate a complex depth, comprehensive breadth of knowledge of the management of the pediatric patient within the scope of practice of the paramedic.
119.0 Demonstrate a complex depth, comprehensive breadth of knowledge of the management of the geriatric patient within the scope of practice of the paramedic.
120.0 Demonstrate a complex depth, comprehensive breadth of knowledge of management of the patient with special challenges within the scope of practice of the paramedic, patients of all ages.
121.0 Demonstrate a simple depth, foundational breadth of knowledge of risks and responsibilities of transport.
122.0 Demonstrate a complex depth, comprehensive breadth of knowledge of establishing and working within the incident management system.
123.0 Demonstrate a simple depth, foundational breadth of knowledge of responding to an emergency during a multiple casualty incident.

124.0 Demonstrate a complex depth, comprehensive breadth of knowledge of air medical transport risks, needs, and advantages.
125.0 Demonstrate a simple depth, simple breadth of knowledge for safe vehicle extrication and use of simple hand tools.
126.0 Demonstrate a simple depth, simple breadth of knowledge of risks and responsibilities of operating in a cold zone at a hazardous material or other special incident.
127.0 Demonstrate a simple depth, simple breadth of knowledge of risks and responsibilities of operating on the scene of a natural or man-made disaster.

Management Option: This option (outcomes 128-138) prepares students for administrative and supervisory positions in the Emergency Medical Services field.

128.0 Demonstrate leadership and administrative skills basic to management emergency medical service systems.
129.0 Interpret federal, state and local laws as they apply to emergency medical service systems.
130.0 Demonstrate knowledge of operational and organizational structures of emergency medical service systems.
131.0 Demonstrate knowledge of psychological problems and stressors in emergency medical service employees and find appropriate solutions.
132.0 Demonstrate knowledge of materials and supplies used in emergency medical service systems.
133.0 Demonstrate knowledge of occupational safety and health.
134.0 Demonstrate knowledge of appropriate workloads for each employee.
135.0 Review, approve and monitor departmental capital and operational budgets.
136.0 Identify and apply legal reimbursement systems.
137.0 Comply with accreditation standards of governmental or governmental-appointed agencies and organizations.
138.0 Demonstrate computer literacy.

Education Option: This option (outcomes 139-144) prepares students as trainers and/or instructors in the EMS field.

139.0 Demonstrate knowledge of basic teaching methods, learning and educational psychology.
140.0 Describe and discuss curriculum design and development.
141.0 Demonstrate appropriate measurement and evaluation skills.
142.0 Demonstrate mastery of required technical skills.
143.0 Demonstrate classroom management skills.
144.0 Demonstrate computer literacy.

Florida Department of Education
Student Performance Standards

Program Title: **Emergency Medical Services**
CIP Number: **1351090402**
Program Length: **73 credit hours**

At the completion of this program, the student will be able to:	
EMT: Completion of intended outcomes 01-63 lead to the student's eligibility to sit for the licensure exam for EMT.	
01.0	**EMS Systems:** Demonstrate a simple depth, foundational breadth of knowledge of EMS systems. The student will be able to:
01.01	Define Emergency Medical Services (EMS) systems.
01.02	Discuss the historical background of the development of the EMS system.
01.03	Identify the four levels of national EMS providers (EMR, EMT, AEMT and PM) as well as the three levels (EMR, EMT, and PM) in the State of Florida.
01.04	Discuss the specific statutes and regulations regarding the EMS system in Florida.
01.05	Discuss vehicle and equipment readiness.
01.06	Characterize the EMS system's role in prevention and public education.
01.07	Systems of care, e.g., Stroke, STEMI, Trauma, Pediatrics (S, F)
01.08	MIH/CP and other EMS-related specialty roles (S, S)
01.09	Discuss the roles and responsibilities of the EMT related to personal safety of the crew, patient and by standers.
01.10	Discuss the roles and responsibilities of the EMT to operate emergency vehicles, provide scene leadership and perform patient assessment and administer emergency care.
01.11	Discuss the maintenance of and differences between certification and licensure for the EMS professional in the State of Florida and NREMT.
01.12	Define quality improvement and discuss the EMT's role in the process.
01.13	Quality improvement vs. quality assurance (S, F)
01.14	Role of medical oversight (S, S)
01.15	Culture of safety
01.16	Patient safety (SF)

01.17	Identify the basics of common methods of payment for healthcare services.
01.18	Analyze attributes and attitudes of an effective leader.
01.19	Demonstrate effective techniques for managing team conflict.
01.20	Describe factors that influence the current delivery system of healthcare.
01.21	Continuum of care (S, F)
01.22	Discuss the importance of continuing medical education and skills retention.
01.23	Assess personal attitudes and demeanor that may distract from professionalism.
01.24	Serve as a role model and exhibit professional behaviors in the following areas: • Integrity • Empathy • Self-motivation • Appearance and personal hygiene • Self-confidence • Communications (including phone, email and social media etiquette) • Time management • Teamwork and diplomacy • Respect • Patient advocacy (inclusive of those with special needs, alternate lifestyles and cultural diversity) • Careful delivery of service
02.0	**Research:** Demonstrate a simple depth, simple breadth of knowledge of research and evidence-based decision making. The student will be able to:
02.01	Discuss EMS research and evidence-based decision making. • Conduct scientific literature searches • Read, interpret, and extract information from journal articles relevant to a project
02.02	Explain the importance of assessing and treating patients based on evidence-based decision-making.
02.03	Interpret graphs, charts, and tables.
02.04	Measure time, temperature, distance, capacity, and mass/weight.
02.05	Convert and use traditional and metric units.
02.06	Make estimations, approximations and judge the reasonableness of the result.
02.07	Convert time from a 12-hour format to a 24-hour format

	02.08 Demonstrate ability to evaluate and draw conclusions.
	02.09 Calculate ratios.
	02.10 Explain the rationale for the EMS system gathering data.
	02.11 Impact of research on EMT care (S, S).
	02.12 Data collection (S, S).
	02.13 Evidence-based decision making (S, S).
03.0	**Workforce Safety and Wellness:** Demonstrate a fundamental depth, foundational breadth of knowledge of workforce safety and wellness. The student will be able to:
	03.01 Explain the need to determine scene safety.
	03.02 Discuss the importance of body substance isolation (BSI).
	03.03 Describe the steps and equipment the EMT should take for personal protection from airborne and blood borne pathogens and communicable disease.
	03.04 List possible emotional reactions that an individual (EMT and EMT family, Patient and Patient family) may experience when faced with trauma, illness, death and dying.
	03.05 Discuss the steps the EMT should take when approaching a family confronted with death and dying.
	03.06 Recognize the warning signs of personal stress and discuss the strategies and resources available for EMTs to utilize.
	03.07 Demonstrate good body mechanics while using a stretcher and other patient moving devices.
	03.08 Discuss the guidelines and safety precautions to be followed when lifting and moving patients and equipment.
	03.09 Discuss patient positioning in common emergency situations.
	03.10 Discuss situation that may require the use of medical restraints on the patient and explain guidelines and safety consideration for their use.
	03.11 Define “infectious disease” and “communicable disease.”
	03.12 Disease transmission (F, F).
	03.13 Describe the routes of transmission and associated risks for infectious disease.
	03.14 Explain the mode of transmission and the steps to prevent/deal with an exposure of hepatitis, meningitis, tuberculosis and HIV.
	03.15 Explain how immunity to infectious diseases is acquired.

	03.16 Explain post exposure management of exposure to patient blood or body fluids, including proper notification documentation.
	03.17 Describe the components of physical fitness and mental wellbeing.
	03.18 Identify personal health practices and environmental factors which affect physical, mental, and emotional wellbeing.
	03.19 Prevention of work-related injuries and illnesses (F, F).
	03.20 Responder mental health, resilience and suicide prevention (F, F).
	03.21 Wellness principles (F, F).
	03.22 Discuss complementary and alternative health practices.
	03.23 Explain the basic concepts of positive self-image, wellness and stress.
	03.24 Discuss the need for a wellness and stress control plan that can be used in personal and professional life.
	03.25 Explore the importance of adequate nutrition (i.e., U.S. Department of Agriculture's MyPlate food guide (www.choosemyplate.gov)).
	03.26 Demonstrate safe behaviors in the proper use of medical equipment.
	03.27 Explain the theory of root- cause analysis.
	03.28 Identify and describe methods in medical error reduction and prevention in the various healthcare settings.
	03.29 Identify and practice security procedures for medical supplies and equipment in the various healthcare settings.
	03.30 Describe fire, safety, disaster and evacuation procedures in the various healthcare settings.
	03.31 Discuss applicable accrediting and regulatory agency patient safety guidelines.
04.0	**Documentation:** Demonstrate a fundamental depth, foundational breadth of knowledge of the principles of medical documentation and report writing. The student will be able to:
	04.01 Discuss applications of technology in healthcare.
	04.02 Demonstrate basic computer skills.
	04.03 Interpret and utilize information from electronic health records.
	04.04 Identify methods of electronic communication to access and distribute data.
	04.05 Describe the use and importance of properly written communication and patient care documentation.
	04.06 Explain the legal implication of the patient care report.

	04.07 Supporting medical necessity (S, S).
	04.08 Identify the minimum dataset reference patient information and administrative information on the patient care report.
	04.09 Understand how to document refusal of care, including legal implications.
	04.10 Discuss the implications of the Health Insurance Portability and Accountability Act of 1996 on confidential documentation.
	04.11 Describe the special considerations concerning mass casualty incident documentation.
	04.12 Demonstrate completion of a patient care report for a medical and trauma patient.
05.0	**EMS System Communication:** Demonstrate a simple depth, simple breadth of knowledge of the EMS communication system, communication with other health care professionals, and team communication. The student will be able to:
	05.01 Understand the basic principles of the various types of communications equipment used in EMS.
	05.02 Describe the use of radio communication and correct radio procedures, including the proper methods of initiating and terminating the radio call/transmission.
	05.03 Explain the rationale for providing efficient and effective radio communications and patient reports.
	05.04 Identify the essential components of the verbal report and legal aspects that need to be considered.
	05.05 Perform an organized and concise radio transmission.
	05.06 Team communication and dynamics (S, S).
	05.07 Perform an organized, concise verbal patient report that would be given to the staff at a receiving facility.
	05.08 Perform a brief, organized verbal report that would be given during transfer of care at an incident scene.
06.0	**Therapeutic Communication:** Demonstrate a simple depth, simple breadth of knowledge of the principles of therapeutic communication. The student will be able to:
	06.01 Describe principles of therapeutic and effective communication with patients.
	06.02 Health care literacy (S, S).
	06.03 Non-discriminatory communication that addresses inherent or unconscious bias, is culturally aware and sensitive, and intended to improve patient outcome (S, S).
	06.04 Discuss basic speaking and active listening skills.
	06.05 Recognize the importance of patient/client education regarding healthcare.
	06.06 Discuss the adjustment of communication strategies to effectively communicate with patients with: • Differing age groups

	• Differing developmental stages • Special needs • Differing cultures, including language barriers
06.07	Discuss the communication techniques that should be used to interact with the patient, patient family, bystanders, and individuals from other agencies including verbal diffusion and interview techniques.
06.08	Discuss the strategies for interviewing persons in special situations.
06.09	Distinguish between and respond to verbal and non-verbal cues.
06.10	Analyze elements of communication using a sender-receiver/close loop model.
06.11	Exhibit positive non-verbal behaviors.
06.12	Establish proper patient rapport.
07.0	**Medical/Legal and Ethics:** Demonstrate a fundamental depth, foundational breadth of knowledge of medical legality and ethics. The student will be able to:
07.01	Discuss the rational, importance, and limitations of patient autonomy.
07.02	Differentiate between expressed, implied and involuntary consent.
07.03	Discuss the methods of obtaining consent and procedures for minors.
07.04	Discuss the issues of abandonment, negligence, false imprisonment and battery and their implications to the EMT.
07.05	Discuss the implications for the EMT in patient refusal of care and/or transport.
07.06	Explain the importance, necessity and legality of patient confidentiality.
07.07	Discuss the importance of Do Not Resuscitate [DNR] (advance directives) and local or Florida provisions regarding EMS application.
07.08	Patient rights/advocacy (S, S).
07.09	Discuss State of Florida and Federal special reporting situations including: • Abuse • Sexual assault • Gunshot and knife wounds • Communicable disease • Animal Bites
07.10	Differentiate between civil tort and criminal actions.
07.11	Discuss the elements of negligence and defenses/protections from liability.

	07.12 Discuss the role of the EMT at crime scenes and preservation of evidence.
	07.13 Define ethics and morality and discuss their implication for the EMT.
	07.14 Discuss Florida legislation such as: • Baker Act (394.451, F.S.) • Marchman Act (397.601, F.S. and 397.675, F.S.) • Emergency Examination and Treatment of Incapacitated Persons Act (401.445, F.S.)
	07.15 Differentiate between the scope of practice and the standard of care as applied to the EMT.
	07.16 Discuss the legal concepts and limitations of immunity, including Good Samaritan statutes and governmental immunity.
	07.17 Describe the appropriate patient management and care techniques in a refusal of care situation.
	07.18 Analyze the relationship between the law, morals and ethics in EMS and the premise that should under lie the EMTs ethical decisions.
	07.19 Describe the criteria necessary to honor an advance directive.
	07.20 Explain the rationale for the needs, benefits and varying degrees of advance directives.
08.0	**Anatomy and Physiology**: Demonstrate a fundamental knowledge of the anatomy and function of all human systems to the practice of EMS. The student will be able to:
	08.01 Identify the following topographic terms: • Medial • Lateral • Proximal • Distal • Superior • Inferior • Anterior • Posterior • Midline • Right and left • Mid-clavicular • Bilateral • Mid-axillary
	08.02 Describe the life support chain, aerobic metabolism, and anaerobic metabolism.
	08.03 Define anatomy, physiology, pathophysiology, and homeostasis.
	08.04 Identify and describe the anatomical structures and functions of the following: • Skeletal system

• Muscular system • Respiratory system • Circulatory/ cardiovascular system • Nervous system • Integumentary system • Digestive system • Endocrine system • Renal system • Reproductive system • Lymphatic system
08.05 Explain cellular anatomy and physiology.
08.06 Explain cellular respiration.
08.07 Discuss cell division.
08.08 Describe the different types of muscle tissues including skeletal, smooth and cardiac.
08.09 Name and identify the location of the bones of the axial and appendicular skeleton.
08.10 Describe the classification and types of joints.
08.11 Discuss the mechanisms of breathing including: • Mechanical ventilation • Pulmonary volumes • Dead space • Lung compliance
08.12 Explain the diffusion of gases in external and internal respiration.
08.13 Describe oxygen and carbon dioxide transport in the blood.
08.14 Describe nervous and chemical mechanisms that regulate respirations.
08.15 Discuss respiration and acid-base balance.
08.16 Discuss the hemodynamics of blood pressure.
08.17 Discuss the role of nutrition, metabolism and body temperature on body function.
08.18 Describe the causes, advantages, and disadvantages of a fever.
08.19 Discuss the hypothalamus functions as the thermostat in the body.

09.0	**Medical Terminology:** Demonstrate a fundamental knowledge in the use of medical terminology. The student will be able to:
	09.01 Identify medical terminology word parts such as: • Root words • Prefixes • Suffixes • Combining forms
	09.02 Correctly utilize medical terminology describing each of the following: • Body structures • Functions • Conditions and disorders • Body regions • Cavities • Areas • Landmarks
	09.03 Correctly use medical abbreviations and symbols.
	09.04 Read and understand basic medical documentation in medical records and medical reports.
	09.05 Communicate with healthcare professionals utilizing basic medical terminology.
	09.06 Explain the rationale for using accepted medical terminology correctly.
10.0	**Pathophysiology:** Demonstrate a fundamental knowledge of the causes and pathophysiology of shock and the components of resuscitation. The student will be able to:
	10.01 Discuss signs of irreversible death.
	10.02 Review the anatomy and physiology of the respiratory and cardiovascular systems.
	10.03 Discuss and identify the pathophysiology of respiratory failure and respiratory and cardiac arrest.
	10.04 Understand shock, including the pathophysiology, causes, and the signs and symptoms associated with the various types of shock.
	10.05 Discuss the variations in the pathophysiology of shock Patients of all ages.
11.0	**Life Span Development:** Demonstrate a fundamental knowledge of life span development to patient assessment and management. The student will be able to:
	11.01 Describe the major physiologic and psychosocial characteristics Patients of all ages.
12.0	**Public Health:** Demonstrate a simple knowledge of the principles of illness and injury prevention in emergency care. The student will be able to:

	12.01 Define public health and explain the goal of the public health field.
	12.02 Identify the EMS role within the public health field.
	12.03 Discuss basic concepts of epidemiology.
	12.04 Discuss ways of EMS involvement in injury prevention.
	12.05 Identify areas of need for prevention programs in the community.
13.0	**Principles of Pharmacology:** Demonstrate a simple depth, simple breadth of knowledge of pharmacology, medication safety, and medication types used during an emergency. The student will be able to:
	13.01 Explain the "rights" of medication administration and describe how each one related to EMS.
	13.02 Discuss and differentiate the various medication forms and the appropriate routes of administration
	13.03 Describe the difference between a generic medication name and trade name and provide an example of each.
	13.04 Specific medication classes to be determined locally • Class names (S, S) • Class indications (S, S) • Class complications (S, S) • Class side effects (S, S) • Polypharmacy (S, S)
	13.05 Discuss the components and elements of a drug profile including: • Class • Actions • Contraindications • Side effects • Dose • Route • Adverse drug reactions (S, S) • Medication response relationships (F,F)
	13.06 Describe the role of medical direction in medication administration and explain the difference between direct orders (online) and standing orders (off-line).
14.0	**Pharmacology:** Demonstrate a fundamental depth, simple breadth of knowledge of emergency medications within the scope of practice of the EMT. The student will be able to:
	14.01 State the following for each medication that can be administered by an EMT as dictated by the State of Florida and local medical direction: • Medication safety • Medication legislation

	• Naming • Classifications • Storage and security • Medication interactions • Adverse drug reactions • Metabolism and excretion • Mechanism of action • Medication response relationships
14.02	State the following for each medication that can be administered by an EMT as dictated by the State of Florida and local medical direction (Acute Medications): • Generic / Trade Names, Drug Classifications • Effects • Actions • Indication • Contraindications • Complications • Routes of administration • Side effects • Interactions • Doses of medications
14.03	Demonstrate the steps in properly inspecting each type of medication. (Medication Administration) • Use a Medication Cross Check procedure • Use an autoinjector • Use a unit-dose, premeasured intranasal device • Administer medications to a patient • Provide pain management, including ethical and safety considerations • Routes of administration
14.04	Discuss the difference between administration versus assistance of patient medications. (Chronic or Maintenance Medications) • Class names • Class indications • Class complications • Class side effects • Polypharmacy
15.0	**Respirations:** Demonstrate a fundamental depth, foundational breadth of knowledge of respiration. The student will be able to:
15.01	Anatomy of the Respiratory System and review the pulmonary ventilation process to include mechanics of ventilation and alveolar ventilation (tidal volumes, dead space, etc.): • Control of respirations

	• Mechanics of respiration • Pulmonary ventilation • Oxygenation • Mechanical ventilation
15.02	Physiology and pathophysiology of respiration • Pulmonary ventilation • Oxygenation • Respiration • External • Internal • Cellular
15.03	Demonstrate the correct operation of oxygen tanks and regulators.
15.04	Describe the following regarding supplemental oxygen delivery devices: • Indications • Contraindications • Advantages • Disadvantages • Complications • Liter flow range • Concentration of delivered oxygen • Procedures • Purpose • Components
15.05	Demonstrate the use of low, medium, high, and variable concentration oxygen delivery devices for patients of all ages.
15.06	Describe assessment and management for adequate and inadequate respiration, including the use of pulse oximetry and capnography.
15.07	Explain the rationale for providing adequate oxygenation through high inspired oxygen concentrations to patients who, in the past, may have received low concentrations.
15.08	Discuss the use of an oxygen humidifier and the requirements needed for its use.
15.09	Discuss the differences between negative pressure and positive pressure ventilation.
16.0	**Airway Management:** Demonstrate a fundamental depth, foundational breadth of knowledge of airway management patients of all ages within the scope of practice of the EMT. The student will be able to:
16.01	Review the structures and functions of the Anatomy of the Airway and the Respiratory System (Include age- related variations in pediatric and geriatric patients). • Normal • Abnormal

	• Special Considerations (MDI, In-Line Neb, Simple Face Mask, Venturi, CPAP/BiPAP)
16.02	Describe appropriate assessment of the airway and the management for a patient with or without adequate breathing (Include age-related variations in pediatric and geriatric patients).
16.03	Describe the Techniques of assuring a patent airway, indications for airway management, and demonstrate the steps in performing the head-tilt chin-lift and jaw thrust in patients of all ages (Include age- related variations in pediatric and geriatric patients). • Demonstrate the techniques of suctioning. • Demonstrate relief of FBAO. • Demonstrate how to insert an oral and nasal -airway adjunct. • Demonstrate how to insert both esophageal and supra-glottic airways.
17.0	**Artificial Ventilations:** Demonstrate a fundamental depth, foundational breadth of knowledge of assessment and management utilizing ventilation, patients of all ages. The student will be able to:
17.01	Effect of ventilation on cardiac output • E.g., Bag Valve Mask, Ventilator, CPAP, Hyper Mechanical Inflation
17.02	Demonstrate how to ventilate a patient with a pocket mask.
17.03	Demonstrate the safe and effective ventilation for a patient with a BVM for one or two rescuers using oral-nasal adjuncts with appropriate airway positioning.
17.04	Discuss the signs of adequate and inadequate ventilation using the BVM.
17.05	Describe the steps involved in performing a comprehensive assessment of ventilations.
17.06	Demonstrate how to ventilate a patient with a stoma.
17.07	Demonstrate the use of various devices used in the assessment of supra-glottic airway placement.
17.08	Describe the following for a patient with an automatic transport ventilator (ATV): • Indications • Contraindications • Advantages • Disadvantages • Complications • Technique for ventilating
17.09	Describe the following for a patient with a CPAP: • Indications • Contraindications • Advantages • Disadvantages • Complications • Technique for ventilating

18.0	**Scene Size-Up:** Demonstrate a fundamental depth, foundational breadth of knowledge of scene management and multiple patient situations**.** The student will be able to:
18.01	Recognize and describe hazards/potential hazards at the scene.
18.02	Discuss common mechanisms of injury/nature of illness.
18.03	Discuss the priority considerations for multiple-patient situations.
18.04	Explain why it is important for the EMT to anticipate and determine the need of appropriate Scene management including but not limited to traffic incident management, additional resources, or specialty resources.
18.05	Discuss the importance of continuous scene assessment to ensure safety of the EMS Impact of the environment on team and the patient care.
18.06	Explain why it is important for the EMT to anticipate and determine the need for additional or specialized resources.
18.07	Discuss the importance of continuous scene assessment to ensure safety of the EMS team and the patient.
18.08	Discuss the minimum standard precautions that should be followed and PPE that should be worn as appropriate.
18.09	Discuss special considerations for dealing with a violent scene.
18.10	Explain the rationale for crew members to evaluate scene safety prior to entering.
18.11	Explain how patient situations affect your evaluation of mechanism of injury or illness.
19.0	**Primary Assessment:** Demonstrate a fundamental depth, simple breadth of knowledge of the primary assessment for all patient situations. The student will be able to:
19.01	Summarize the elements of a general impression of the patient.
19.02	Explain the reason for performing a primary assessment.
19.03	Discuss and demonstrate methods of assessing level of responsiveness using AVPU.
19.04	Discuss and demonstrate methods of assessing the airway and providing airway care patients of all ages.
19.05	Describe and demonstrate methods used for assessing if a patient is breathing, patients of all ages.
19.06	Differentiate between a patient with adequate and inadequate breathing.
19.07	Describe and demonstrate the methods used to obtain a pulse, patients of all ages.
19.08	Discuss and demonstrate assessing the patient for external bleeding.
19.09	Describe and demonstrate the assessment and interpretation of skin color, temperature, moisture and capillary refill, patients of all ages.

	19.10 Explain the reasons prioritizing a patient for care and transport.
	19.11 Describe when it is appropriate to expose the patient completely.
	19.12 Differentiate between critical life-threatening, potentially life- threatening, and non-life-threatening patient presentations.
20.0	**History-Taking:** Demonstrate a fundamental depth, foundational breadth of knowledge of the components of history taking. The student will be able to:
	20.01 Determine and investigate the chief complaint (MOI/NOI).
	20.02 Describe components of the patient history.
	20.03 Explain the importance of obtaining a SAMPLE and OPQRST history.
	20.04 Acknowledge the feelings patients experience during assessment.
	20.05 Discuss the value of obtaining a family and social history.
	20.06 Describe examples of different techniques the EMT may use to obtain information from patients, family or bystanders during the history taking process.
21.0	**Secondary Assessment:** Demonstrate a fundamental depth, foundational breadth of knowledge of techniques used for a secondary assessment. The student will be able to:
	21.01 Discuss the components and techniques of the physical exam and skills involved.
	21.02 Discuss the indications for performing: • Rapid assessment • Focused exam • Head to toe exam
	21.03 Demonstrate: • Rapid exam • Focused exam • Head to toe exam
	21.04 Describe and demonstrate the techniques of inspection, palpation, percussion, and auscultation. • Respiratory system including breath sound quality • Cardiovascular system • Neurological system • Musculoskeletal system • Major anatomical regions
	21.05 Describe and demonstrate the importance of obtaining a baseline set of vital signs. • E.g. Non-Invasive Blood Pressure, Blood Glucose, Temperature
	21.06 Discuss blood pressure ranges, patients of all ages.

22.0	**Monitoring Devices:** Demonstrate a simple depth, simple breath of knowledge of monitoring devices within the scope of practice of the EMT. The student will be able to:
	22.01 Describe and demonstrate the purpose, indications, procedure, normal findings, and limitations of the following patient monitoring technologies. • Pulse oximetry • Glucometer • Capnography • Noninvasive BP monitoring • Thermometry • Telemetry • Cardiac monitoring – 12 lead ECG acquisition and transmission
23.0	**Reassessment:** Demonstrate a fundamental depth, foundational breadth of knowledge of how and when to perform a reassessment for all patient situations. The student will be able to:
	23.01 Describe the components of reassessment and demonstrate the skills involved.
	23.02 Discuss the reasons for repeating the primary assessment as part of the reassessment.
	23.03 Explain trending assessment components and its value to other health professionals who assume care of the patient.
	23.04 Demonstrate the reassessment of patients of all ages.
24.0	**Medical Overview:** Demonstrate a simple depth, foundation breadth of knowledge of pathophysiology, assessment and management of medical complaints. The student will be able to:
	24.01 Pathophysiology, assessment, and management of a medical complaints to include • Identify factors that affect the patient Transport Decision and Medically Appropriate Destination • E.g., Scene Safety, Environmental Factors, Chief Complaint, Preconceptions
	24.02 Discuss forming a field impression and utilizing available information to determine a differential diagnosis.
25.0	**Neurology:** Demonstrate a fundamental depth, foundational breadth of knowledge of the assessment and management of neurologic disorders/emergencies, patients of all ages. The student will be able to:
	25.01 Review the anatomy and physiology of the nervous system.
	25.02 Describe the pathophysiology of the following neurologic disorders: • Altered Mental Status / Decreased Level of Responsiveness (Possible Differential Diagnosis) • Stroke (Hemorrhagic, Occlusive, Transient Ischemic Attack) • Headache • Seizures • Syncope • Dementia vs. delirium • Alzheimer's disease

	• Headache • Brief Resolved Unexplained Event (BRUE) • Other neurological disorders to be determined locally
25.03	Discuss and identify the causes, signs and symptoms of ischemic strokes, hemorrhagic strokes, and transient ischemic attacks and their similarities and differences.
25.04	Discuss and demonstrate how to use a stroke scoring system in the assessment of patients with suspected stroke.
25.05	Define and differentiate generalize seizure, partial seizure and status epilepticus and list their possible causes.
25.06	Define and differentiate migraine headache, sinus headache, tension headache and discuss how to distinguish harmless headaches from something more serious.
25.07	Define “altered mental status” and identify the possible causes.
25.08	Describe and demonstrate the assessment and management of the patient with various neurological emergencies in patients of all ages to include: • Strokes • Headaches • Seizures • Altered mental status
25.09	Discuss the transport of the stroke patient to the appropriate treatment center.
26.0	**Abdominal and Gastrointestinal Disorder:** Demonstrate a fundamental depth, foundational breadth of knowledge of the assessment and management of abdominal and gastrointestinal disorders/emergencies, patients of all ages The student will be able to:
26.01	Review the basic anatomy and physiology the gastrointestinal, genital and urinary systems.
26.02	Define and describe the pathophysiology of the following abdominal and gastrointestinal disorders: • Abdominal pain • Acute abdomen • Peritonitis • Appendicitis • Pancreatitis • Cholecystitis • Gastrointestinal bleeding • Esophageal varices • Gastroenteritis • Ulcers • Intestinal obstruction • Hernia • Abdominal aortic aneurysm

	26.03 Identify the signs and symptoms of common GI disorders.
	26.04 Describe and demonstrate the assessment and management of the patient with various gastrointestinal emergencies.
	26.05 Differentiate between hemorrhagic and non-hemorrhagic abdominal pain.
27.0	**Immunology:** Demonstrate a fundamental depth, foundational breadth of knowledge of the assessment and management of immunology disorders/emergencies, patients of all ages The student will be able to:
	27.01 Define and differentiate allergic reaction and anaphylaxis.
	27.02 Describe the pathophysiology of the following immunology disorders: • Allergic reaction • Anaphylaxis • Anaphylactic shock
	27.03 Describe and demonstrate the assessment and management of the patient in patients of all ages experiencing an allergic or anaphylactic reaction.
	27.04 Review the following for the epinephrine auto-injector: • Generic and trade names • Medication forms • Dose • Administration • Action • Contraindications
	27.05 Demonstrate the use of epinephrine auto-injector.
	27.06 Review the anatomy and physiology of the organs and structures related to anaphylaxis.
	27.07 Describe the incidence, morbidity and mortality of anaphylaxis.
	27.08 Recognize the signs and symptoms related to anaphylaxis.
	27.09 Describe the risk factors for and prevention of anaphylaxis and appropriate patient education.
	27.10 Discuss common antigens most frequently associated with anaphylaxis.
	27.11 Explain the importance of separating the patient from the allergen when possible.
28.0	**Infectious Disease:** Demonstrate a simple depth, simple breadth of knowledge of the assessment and management of a patient who may have an infectious disease, patient of all ages The student will be able to:
	28.01 Discuss the causes of infectious diseases
	28.02 Describe the pathophysiology of infectious diseases of significant public health concern.

	28.03 Describe and demonstrate the assessment and management of the patient in patients of all ages experiencing an infectious disease.
	28.04 Discuss mandatory notification to state or federal agencies of various diseases.
	28.05 Identify patients with risk factors for infectious disease.
	28.06 Explain the principles and practices of infection control in prehospital care.
	28.07 Describe and discuss the rationale for the various types of PPE.
	28.08 Discuss the proper disposal of contaminated supplies (sharps, gauze sponges, tourniquets, etc.).
	28.09 Discuss decontamination of the ambulance and disinfection of patient care equipment, and areas in which care of the patient occurred.
	28.10 Describe the actions to take if the EMS provider is exposed to an infectious disease.
	28.11 Demonstrate the ability to comply with body substance isolation guidelines.
	28.12 Discuss the pathophysiology, risk factors, assessment, and prehospital management of sepsis/systemic inflammatory response syndrome (SIRS)
	28.13 Identify the signs and symptoms and discuss the assessment and prehospital management of a patient in septic shock.
	28.14 Describe the risk factors for and prevention of infectious disease and appropriate patient education (including but not limited to handwashing, PPE use, and disposal of contaminated supplies)
29.0	**Endocrine Disorders:** Demonstrate a fundamental depth, foundational breadth of knowledge of the assessment and management of endocrine disorders/emergencies, patients of all ages. The student will be able to:
	29.01 Review the anatomy and physiology of the endocrine system and its main function in the body.
	29.02 Describe the pathophysiology and signs and symptoms of the following endocrine disorders: • Insulin dependent Diabetes Mellitus • Non-insulin dependent Diabetes Mellitus • Hypoglycemia • Hyperglycemia • Diabetic Ketoacidosis (DKA) • Hyperglycemic Hyperosmolar Nonketotic Syndrome (HHNS)
	29.03 Define and differentiate between Type I and Type II Diabetes.
	29.04 Identify and demonstrate the steps in the management of the patient taking diabetic medicine with an altered mental status and a history of diabetes, patients of all ages.
	29.05 Review the following for oral glucose: • Generic and trade names • Medication forms

		• Dose • Administration • Action • Contraindications
	29.06	Demonstrate the steps of using a glucometer device and administering oral glucose.
	29.07	Describe and demonstrate the assessment and the management of the patient experiencing an endocrinologic emergency to include hypo- and hyper-glycemia.
	29.08	Discuss the general assessment findings associated with endocrinologic emergencies. Across patients of all ages.
	29.09	Describe the risk factors for and prevention of endocrine emergencies, including but not limited to healthy lifestyles and modifiable risk factors, the use of blood sugar monitoring devices and self-administration of prescribed medications.
30.0	**Psychiatric:** Demonstrate a fundamental depth, foundational breadth of knowledge regarding the assessment and management of psychiatric emergencies, patients of all ages The student will be able to:	
	30.01	Differentiate among behavior, psychiatric disorders and behavioral emergencies
	30.02	Discuss common psychiatric disorders and behavioral emergencies.
	30.03	Discuss the general factors that may cause an alteration in a patient's behavior.
	30.04	Discuss patterns of violence, abuse, and neglect.
	30.05	Discuss the risk factors/signs or symptoms of various psychiatric emergencies to include acute psychosis, suicide ideation, excited delirium, anxiety, depression, medical fear, substance use disorder, and PTSD.
	30.06	Manage a behavioral emergency scenario applying knowledge of medical/legal Florida Statutes.
	30.07	Describe and demonstrate the assessment and management of the patient experiencing a behavioral or psychiatric emergency.
	30.08	Discuss the role of the National Suicide and Crisis Lifeline (988) in the United States.
	30.09	Demonstrate an understanding of appropriate and available mental health resources and provide patient education.
	30.10	Describe and demonstrate the assessment and management of the patient experiencing a behavioral or psychiatric emergency, patients of all ages.
	30.11	Describe the biological, psychosocial, and sociocultural influences on psychiatric disorders.
	30.12	Describe the special considerations for the safety of the EMS provider and EMS crew, the patient and bystanders when dealing with behavioral and psychiatric emergencies.
	30.13	Describe and demonstrate methods of restraint that may be used in the management of a patient with a behavioral emergency.
	30.14	Explain the importance of provider behavior and communication in the care of a patient with a behavioral emergency.

31.0	**Cardiovascular**: Demonstrate a fundamental depth, foundational breadth of knowledge of the assessment and management of cardiovascular emergencies, patients of all ages. The student will be able to:
31.01	Review the basic anatomy and physiology of the cardiovascular system.
31.02	Describe the pathophysiology and signs and symptoms of the following cardiovascular disorders: • Acute coronary syndrome • Angina pectoris • Thromboembolism • Myocardial infarction • Hypertensive emergencies • Aortic aneurysm/dissection • Left and right sided heart failure • Cardiogenic shock • Cardiac arrest
31.03	Describe and demonstrate the assessment and management of the patient experiencing a cardiac emergency. Patients of all ages.
31.04	Discuss the indications and contraindications for automated external defibrillation (AED). (Including automatic, manual and vest type).
31.05	Explain the impact of age and weight on defibrillation.
31.06	Discuss the position of comfort for patients with various cardiac emergencies.
31.07	Explain the rationale for early defibrillation.
31.08	Discuss and differentiate among various types of external defibrillators.
31.09	Discuss and differentiate among the various types of implanted cardiac devices.
31.10	Understand the importance of maintenance and operators check list for AED's.
31.11	Demonstrate the ability to use an AED according to the latest American Heart Association (AHA) guidelines.
31.12	Explain the role medical direction plays in the use of automated external defibrillation.
31.13	Explain the rationale for administering nitroglycerin oxygen and ASA to a patient with chest pain or discomfort.
31.14	Demonstrate the assessment and documentation of patient response to the automated external defibrillator.
31.15	Demonstrate the assessment and documentation of patient response to nitroglycerin.
31.16	Discuss the purpose and use of CPR assist devices.

	31.17 Describe the risk factors for and prevention of cardiac related diseases and provide appropriate patient education.
	31.18 Discuss the signs and symptoms of acute coronary syndrome and provide appropriate patient education to include self-administration of prescribed medications.
32.0	**Toxicology:** Demonstrate a fundamental depth, foundational breadth of knowledge of the assessment and management of toxicological (poisoning and overdose) emergencies, patients of all ages The student will be able to:
	32.01 Define and differentiate among toxicology, poisoning, and overdose.
	32.02 Describe the pathophysiology and signs and symptoms of the following toxicological emergencies, including but not limited to: • Food poisoning • Carbon monoxide poisoning • Cyanide poisoning • Exposure to acid or alkaline substances • Exposure to hydrocarbons • Methanol ingestion • Isopropanol ingestion • Ethylene glycol ingestion • Exposure to poisonous plants • Drug withdrawal • Alcoholic syndrome • Withdrawal syndrome (including delirium tremens) • Illicit drug use • Medication overdose • Opioid overdose • Organa phosphate overdose • Nerve agents
	32.03 Discuss various ways that toxins enter the body, including inhalation, ingestion, injection, and absorption.
	32.04 Discuss and demonstrate the assessment and management for the patient with a toxicological emergency.
	32.05 Discuss the role of the Poison Control Center with the nationwide contact number 800-222-1222 in the United States.
	32.06 Explain the rationale for contacting medical direction early in the prehospital management of a patient with a toxicological emergency.
	32.07 Review the following for Narcan (naloxone): • Generic and trade names • Medication forms • Dose • Administration • Action

	• Contraindications • Discuss the use of medication assisted treatments for substance misuse disorders including suboxone, methadone, and naltrexone and potential complications. • Discuss safe uses and practices with potentially toxic substances while providing appropriate patient education.
32.08	Discuss the use of medication assisted treatments for substance misuse disorders including suboxone, methadone, and naltrexone and potential complications.
32.09	Discuss safe uses and practices with potentially toxic substances while providing appropriate patient education.
33.0	**Respiratory:** Demonstrate a fundamental depth, foundational breadth of knowledge of the assessment and management of respiratory disorders/emergencies, patients of all ages. The student will be able to:
33.01	Review the basic anatomy and physiology of the respiratory system.
33.02	Describe the pathophysiology and signs and symptoms of the following respiratory disorders: • Chronic Obstructive Pulmonary Disease • Asthma • Bronchiolitis • Pulmonary Edema • Spontaneous Pneumothorax • Hyperventilation Syndrome • Cystic Fibrosis • Pulmonary Embolism • Pneumonia • Viral Respiratory Infections • Poisonous Exposures • Bacterial respiratory infections
33.03	Discuss signs of adequate air exchange.
33.04	Discuss the signs and symptoms of a patient across the continuum from respiratory distress to failure.
33.05	Describe and demonstrate the assessment and management of the patient with a respiratory emergency. Patients of all ages.
33.06	Review the following for the metered-dose inhalers and small volume nebulizers for medications within the scope of practice of the EMT: • Generic name • Medication forms • Dose • Administration • Action • Indications • Contraindications

	33.07 Describe and demonstrate the steps in facilitating the use of an inhaler and a small volume nebulizer.
	33.08 Differentiate between upper and lower airway obstruction.
	33.09 Demonstrate assessment and interpretation of normal and abnormal lung and breath sounds.
	33.10 Discuss common respiratory disorders, self-administered medications, and equipment (including, but not limited to: home oxygen, nebulizers, and CPAP) and provide appropriate patient education.
34.0	**Hematology:** Demonstrate a simple depth, simple breadth of knowledge of the assessment, and management of hematology disorders, patients of all ages The student will be able to:
	34.01 Review the compositions and functions of blood and plasma.
	34.02 Describe the pathophysiology of the following hematology disorders: • Anemia • Sickle Cell Anemia/Sickle Cell Crisis • Hemophilia/Clotting Disorder
	34.03 Describe and demonstrate the assessment and the management of the patient with a hematological disorder. Patients of all ages.
	34.04 Discuss signs, symptoms, and potential complications of various hematological disorders and provide appropriate patient education.
35.0	**Genitourinary/Renal:** Demonstrate a simple depth, simple breath of knowledge of the assessment and management of genitourinary/renal emergency, patients of all ages. The student will be able to:
	35.01 Review the basic anatomy and physiology of the genitourinary and renal systems.
	35.02 escribe the pathophysiology and signs and symptoms of the following genitourinary/ renal disorders: • Urinary tract infection • Kidney stones • Kidney failure
	35.03 Discuss the basic principles and complications of kidney dialysis.
	35.04 Discuss the recognition and complications of urinary catheters.
	35.05 Describe and demonstrate the assessment and management of the patient with a dialysis emergency. Patients of ages.
	35.06 Discuss traumatic injuries to the genitourinary system, including, but not limited to sexual assault (female and male).
36.0	**Gynecology:** Demonstrate a fundamental depth, foundational breadth of knowledge of the assessment and management of gynecologic emergencies, patients of all ages. The student will be able to:
	36.01 Review the basic anatomy and physiology of the female reproductive system.

	36.02 Describe the pathophysiology and signs and symptoms of the following gynecologic disorders and emergencies, including but not limited to: • Sexual assault • Nontraumatic vaginal bleeding • Menstrual pain • Ovarian cyst • Endometritis • Endometriosis • Pelvic inflammatory disease • Sexually Transmitted Disease
	36.03 Describe and demonstrate the assessment and management of the patient experiencing a gynecologic emergency. Patients of patients of all ages.
	36.04 Describe the assessment and management of a patient who has experienced a sexual assault including the psychosocial impact and assessment findings/presentations.
	36.05 Discuss the professional and psychological importance of maintaining a patient's modesty and privacy while still being able to obtain necessary information.
	36.06 Discuss the need to provide care for a patient of sexual assault, while still preventing destruction of crime scene information.
37.0	**Non-Traumatic Musculoskeletal Disorders:** Demonstrate a fundamental depth, foundational breadth of knowledge of the assessment and management of non-traumatic fractures, patients of all ages. The student will be able to:
	37.01 Review the basic anatomy and physiology of the musculoskeletal system.
	37.02 Describe and demonstrate the assessment and management of the patient in patients of all ages with a non-traumatic musculoskeletal emergency.
38.0	**Diseases of the Eyes, Ears, Nose, and Throat:** Demonstrate a simple depth, simple breadth of knowledge of assessment and management of diseases of the eyes, ears, nose, and throat, patients of all ages. The student will be able to:
	38.01 Describe and demonstrate the assessment and management of the patient in patients of all ages with abnormal conditions affecting the eyes, ears, nose and throat, including epistaxis.
39.0	**Shock and Resuscitation:** Demonstrate a fundamental knowledge of the causes, pathophysiology, and management of shock and respiratory failure, patients of all ages The student will be able to:
	39.01 Discuss and identify causes and pathophysiology of the categories of hemorrhage and shock.
	39.02 Review causes and pathophysiology of respiratory failure and arrest.
	39.03 Review causes and pathophysiology of cardiac failure or arrest.
	39.04 Discuss the various types and degrees of shock.
	39.05 Discuss post resuscitation management.

	39.06 Explain the system components of CPR, the links in the AHA chain of survival and how each relates to patient survival.
	39.07 Define and differentiate between compensated and decompensated shock.
	39.08 Discuss the importance of teamwork in the successful management of the critical patient.
	39.09 Demonstrate how to perform one and two rescuer CPR, adult, child, and infant.
	39.10 Demonstrate how to perform rescuer level appropriate defibrillation in an adult, child, and infant patient.
	39.11 Demonstrate rapid decision making based on differential field diagnosis of the critical patient with a **special arrest** peri-arrest condition.
	39.12 Describe and demonstrate the assessment and management of the patient with hemorrhage and shock.
	39.13 Discuss ethical issues in resuscitation.
	39.14 Discuss options for termination resuscitation.
40.0	**Trauma Overview:** Demonstrate a fundamental depth, foundational breadth of knowledge of pathophysiology, assessment and management of the trauma patient, patients of all ages. The student will be able to:
	40.01 Discuss pathophysiology of the trauma patient.
	40.02 Discuss the components of a comprehensive trauma systems and levels of trauma centers.
	40.03 Describe the considerations for different transportation modes ***transport and destination issues*** to a trauma center.
	40.04 Discuss the kinematics of blunt and penetrating trauma.
	40.05 Discuss and describe significant and non-significant Mechanism of Injury (MOI) and provide examples of each.
	40.06 Demonstrate the application of the State of Florida's trauma scorecard methodologies as required in Florida Statute (F.S.) and Florida Administrative Code (F.A.C.).
	40.07 Discuss the National Trauma Triage Protocol of injured Patients.
	40.08 Discuss forming a field impression and utilizing available information to determine a differential diagnosis.
	40.09 Identify the need for rapid intervention transport of the trauma patient.
41.0	**Bleeding:** Demonstrate a fundamental depth, foundational breadth of knowledge of pathophysiology, assessment, and management of bleeding, patients of all ages. The student will be able to:
	41.01 Review the anatomy and physiology of the circulatory system.
	41.02 Discuss the different types of bleeding and classes of hemorrhage.

	41.03 Review signs and symptoms of shock (hypo-perfusion).
	41.04 Demonstrate effective hemorrhage control to include application of a tourniquet.
	41.05 Review the pathophysiology of hemorrhagic shock.
	41.06 Recognize the need for rapid transport for patients that are bleeding and showing signs of shock (hypo-perfusion).
	41.07 Describe and demonstrate the assessment and management of a patient with hemorrhagic shock.
	41.08 Discuss the possible complications of an improperly applied dressing, bandage, tourniquet, and hemostatic agents.
42.0	**Chest Trauma:** Demonstrate a fundamental depth, simple breadth of knowledge of pathophysiology, assessment and management of chest trauma, patients of all ages. The student will be able to:
	42.01 Review the anatomy and physiology of the thoracic/chest cavity and respiratory system.
	42.02 Differentiate between a pneumothorax (open, simple and tension) and hemothorax.
	42.03 Discuss the pathophysiology, signs and symptoms, and MOI of myocardial injuries, including the following: • Pericardial tamponade • Myocardial contusion • Myocardial rupture • Commotio cordis • Aortic sheerer
	42.04 Discuss the pathophysiology, signs and symptoms, and MOI of specific chest wall injuries, including the following: • Rib fracture • Flail segment • Sternal fracture • Open chest wound • Impaled object
	42.05 Describe and demonstrate the assessment and management of chest trauma. ***To include blunt versus penetrating trauma***.
43.0	**Abdominal and Genitourinary Trauma:** Demonstrate a fundamental depth, simple breadth of knowledge of pathophysiology, assessment and management of abdominal and genitourinary trauma, patients of all ages. The student will be able to:
	43.01 Review the anatomy and physiology of the abdominal cavity and genitourinary system.
	43.02 Discuss the pathophysiology, signs and symptoms, and MOI for abdominal trauma including <u>evisceration, impaled objects, blunt versus penetrating mechanisms</u>, hollow and solid ***organ*** injuries.
	43.03 Describe and demonstrate the assessment and management of a patient with a suspected abdominal or genitourinary injury/trauma to include internal/external genitalia.
44.0	**Orthopedic Trauma:** Demonstrate a fundamental depth, foundational breadth of knowledge of pathophysiology, assessment, and management of orthopedic trauma patients of all ages. The student will be able to:

	44.01 Review the anatomy and physiology of the Musculo-skeletal system.
	44.02 Discuss pathophysiology, signs and symptoms, and MOI for orthopedic trauma.
	44.03 Discuss the different types of orthopedic trauma including fracture classifications to include: • Open fracture • Closed fracture • Dislocation • Upper and Lower extremity orthopedic trauma • Sprains and Strains • Pelvic Fracture
	44.04 Explain the rationale for stabilization of an injured extremity.
	44.05 Describe and demonstrate the assessment and management of a patient with a suspected orthopedic trauma.
	44.06 Discuss the following management techniques: • Heat therapy • Cold therapy • Splinting
	44.07 List the six “Ps” of orthopedic injury assessment.
	44.08 Discuss the need for assessment of distal pulses, motor, and sensation before and after splinting.
	44.09 Review age-associated changes in the bones.
	44.10 Discuss the proper procedures to package an amputated body part for replantation.
	44.11 Explain the rationale for splinting at the scene versus load and go.
	44.12 Demonstrate the proper use of various splinting materials and devices to include improvised and traction splints.
45.0	**Soft Tissue Trauma:** Demonstrate a fundamental depth, foundational breadth of knowledge of pathophysiology, assessment, and management of soft tissue trauma, patients of all ages. The student will be able to:
	45.01 Review anatomy and physiology of the integumentary system to include the layers of the skin.
	45.02 Describe the pathophysiology, signs and symptoms, and MOI of soft tissue trauma.
	45.03 Describe and demonstrate the assessment and management of various soft tissue injuries. • Wounds (e.g., avulsion, bite, laceration, puncture, and incisions) • Crush and compartment syndrome • High pressure injection injury
	45.04 Identify types of burn injuries, including:

	• Thermal burn • Chemical burn • Electrical burn • Radiation exposure
45.05	Describe the depth classifications of burn injuries, including: • Superficial burn • Partial-thickness burn • Full-thickness burn • Other depth classifications
45.06	Describe and demonstrate methods for determining body surface area percentage of a burn injury including the “rule of nines," the "rule of palms," and other methods.
45.07	Explain how the seriousness of a burn is related to its depth and percent of body surface area (BSA) involved.
45.08	Review the various management techniques for hemorrhage control.
45.09	Differentiate among the types of injuries requiring the use of an occlusive versus non- occlusive dressing.
45.10	Demonstrate the assessment and management of specific burn injuries including: • Thermal • Inhalation • Chemical ***(in the eye and on the skin)*** • Electrical • Radiation
46.0	**Head, Facial, Neck, and Spine Trauma:** Demonstrate a fundamental depth, foundational breadth of knowledge of pathophysiology, assessment, and management of head, facial, neck and spine trauma, patients of all ages. The student will be able to:
46.01	Review the anatomy and physiology of the head, face, neck and spine.
46.02	Describe the pathophysiology, signs and symptoms, and MOI for head, face, neck, and spine trauma.
46.03	Describe and demonstrate the assessment and management of a patient with the following traumas to the head, face, neck, and spine: • Penetrating neck trauma • Laryngotracheal injury • Skull fracture • Facial fracture • Eye injury (foreign body) *eyes, globe rupture*) • Dental trauma • Shaken Baby Syndrome • Severe epistaxsis

	46.04 Recognize and manage life threats due to face, head, neck, and spine trauma.
	46.05 Discuss and demonstrate the utilization of the Glasgow Coma Scale.
47.0	**Nervous System Trauma:** Demonstrate a fundamental depth, foundational breadth of knowledge of pathophysiology, assessment, and management of nervous system trauma, patients of all ages. The student will be able to:
	47.01 Review the anatomy and physiology of the nervous system.
	47.02 Discuss the pathophysiology, signs and symptoms, and MOI for ***traumatic*** brain ***injury (TBI)*** and spinal cord trauma.
	47.03 Describe and demonstrate the assessment and management of a patient with a ***traumatic*** brain ***injury (TBI)*** and/or spinal cord trauma.
	47.04 Discuss the rationale and potential complications of spinal motion restriction of the entire spine when a cervical spine injury is suspected.
	47.05 Given a scenario, discuss whether or not to remove a helmet prior to transport of a patient.
	47.06 Demonstrate various methods for stabilization and removal of a helmet.
	47.07 Discuss documentation of assessment before, during, and after spinal motion restriction.
48.0	**Special Considerations in Trauma:** Demonstrate a fundamental depth, foundational breadth of knowledge of pathophysiology, assessment and management of trauma patients with special considerations, patients of all ages. The student will be able to:
	48.01 Review the anatomy and physiology for the following trauma patients: • Pregnant • Pediatric • Geriatric
	48.02 Discuss the pathophysiology, signs and symptoms, and MOI of trauma in the following patients: • Pregnant • Pediatric • Geriatric
	48.03 Discuss and demonstrate unique assessment and management considerations for the following trauma patients: • Pregnant • Pediatric • Geriatric • Cognitively impaired
49.0	**Environmental Emergencies:** Demonstrate a fundamental depth, foundational breadth of knowledge of pathophysiology, assessment and management of environmental emergencies, patients of all ages. The student will be able to:
	49.01 Define drowning and discuss its incidence, rick factors and prevention.
	49.02 Discuss the pathophysiology, signs and symptoms, and MOI of the following: • Drowning and water related incidents

	• Temperature-related illness • Bites and envenomation • Dysbarism such as high-altitude injuries • Diving injuries • Lightning (electrical) injury • High altitude illness • Radiation exposure • Other environmental emergencies
	49.03 Describes and demonstrate the assessment and management for a patient with the following: • Drowning and water related incidents • Temperature-related illness • Bites and envenomation • Dysbarism such as high-altitude injuries • Diving injuries • Lightning (electrical) injury • High altitude illness • Radiation exposure • Other environmental emergencies
	49.04 Discuss the fundamental principles of the gas laws including Boyle's, Dalton, Henry and Charles.
	49.05 Discuss scene management and provider safety considerations for a variety of environmental emergencies.
	49.06 Explain the five ways a body can lose heat.
	49.07 Discuss potentially life-threatening venomous species of insects, spiders and snakes in the U.S.
50.0	**Multi-Systems Trauma:** Demonstrate a fundamental depth, foundational breadth of knowledge of pathophysiology, assessment, and management of multi-system trauma and blast injuries, patients of all ages. The student will be able to:
	50.01 Discuss the pathophysiology, signs and symptoms, and MOI of multi-system trauma and blast injuries.
	50.02 Describe and demonstrate assessment and management considerations for a patient of multi system trauma and blast injuries.
51.0	**Obstetrics:** Demonstrate a fundamental depth, foundational breadth of knowledge of management of the obstetric patient within the scope of practice of the EMT. The student will be able to:
	51.01 Identify and describe the anatomical and the physiological changes during pregnancy.
	51.02 Define the stages of labor and discuss how to assess them.
	51.03 Differentiate between cephalic and abnormal delivery.
	51.04 Describe the management of a patient with pre-delivery emergencies.

	51.05 Discuss and demonstrate the patient care measures for all stages of labor in a cephalic delivery for the mother and the newborn.
	51.06 Describe the management of the mother post-delivery.
	51.07 Discuss and demonstrate the patient care measures for all stages of labor in abnormal deliveries for the mother and the newborn.
	51.08 Describe the procedures for handling complications of delivery.
	51.09 Describe special considerations when meconium is present in amniotic fluid or during delivery.
	51.10 Identify the factors that lead to premature birth and low birth weight newborns.
	51.11 Demonstrate the procedures for handling complications of pregnancy including pre-eclampsia, eclampsia, and high risk.
52.0	**Neonatal Care:** Demonstrate a fundamental depth, foundational breadth of knowledge of management of the newborn and neonatal patient within the scope of practice of the EMT. The student will be able to:
	52.01 Discuss and demonstrate assessment and management considerations of a neonate.
	52.02 Define the term neonate.
	52.03 Describe special patient care considerations of a premature baby.
	52.04 Calculate the Apgar score given various newborn situations.
	52.05 Discuss the common signs when ventilatory assistance is appropriate for a neonate.
	52.06 Discuss and demonstrate the steps in resuscitation of a neonate.
	52.07 Review the signs of hypovolemia in a newborn.
	52.08 Discuss the effects maternal narcotic usage has on the newborn.
	52.09 Discuss the management/treatment plan for vomiting in the neonate.
	52.10 Discuss the assessment findings associated with common birth injuries in the neonate.
53.0	**Pediatrics:** Demonstrate a fundamental depth, fundamental breath of knowledge of management of the pediatric patient within the scope of practice of the EMT. The student will be able to:
	53.01 Review the anatomy, physiology and pathophysiology differences of patients.
	53.02 Discuss the differences in approaching and assessing patients.
	53.03 Discuss and demonstrate assessment and management considerations for Sudden Unexplained Infant Death Syndrome (SUIDS).

	53.04 Describe the selection of appropriate airway adjuncts and ventilation devices.
	53.05 Discuss complications of improper utilization of airway adjuncts and ventilation devices.
	53.06 Describe the common causes, assessment and management of respiratory distress, failure, or arrest.
	53.07 Discuss the common causes, assessment and management of hypo-perfusion.
	53.08 Discuss the common causes, assessment and management of cardiopulmonary arrest.
	53.09 Describe the common causes, assessment and management of altered level of consciousness.
	53.10 Describe the common causes, assessment and management of trauma.
	53.11 Describe the common causes, assessment and management of neurological emergencies.
	53.12 Demonstrate proper technique for administering blow-by oxygen.
	53.13 Review proper technique for suctioning.
	53.14 Review appropriate use of airway adjuncts and ventilation devices.
	53.15 Review age-appropriate basic airway clearing maneuvers for a completely obstructed airway.
54.0	**Geriatrics:** Demonstrate a fundamental depth, foundational breadth of knowledge of management of the geriatric patient within the scope of practice of the EMT. The student will be able to:
	54.01 Define and discuss the term geriatrics.
	54.02 Review the anatomy, physiology and pathophysiology of the geriatric patient.
	54.03 Discuss common emotional and psychological concerns and conditions of the geriatric patient.
	54.04 Discuss the importance of fall prevention with the geriatric patient.
	54.05 Describe principles that should be employed when assessing and communicating with the geriatric patient.
	54.06 Describe the common causes, assessment, and management of the geriatric patient with a medical, trauma, or psychosocial complaint.
55.0	**Patients with Special Challenges:** Demonstrate a simple depth, simple breadth of knowledge of the management of the patient with special challenges, patients of all ages. The student will be able to:
	55.01 Discuss the special considerations required when providing emergency care to patients with: • Abuse/neglect of vulnerable populations • Homelessness • Poverty

		• Bariatrics • Tech dependent • Hospice/terminally ill • Tracheostomy • Home care • Sensory deficit/loss • Developmental disability
	55.02	Discuss special considerations regarding common medical devices used in the home care of patients with special challenges including: • Respiratory devices • Cardiac devices • Gastro-urinary devices • Central & peripheral IV catheters
	55.03	Describe home care and the types of patients it serves and the services it encompasses.
	55.04	Differentiate between hospice/palliative care and curative care.
	55.05	Discuss the role of the EMT as a patient advocate for vulnerable populations.
56.0		**Principles of Safely Operating a Ground Ambulance:** Demonstrate a simple depth, foundational breadth of knowledge of risks and responsibilities of transport. The student will be able to:
	56.01	Discuss the importance of performing regular vehicle and equipment inspection.
	56.02	Demonstrate how to perform a daily inspection of an ambulance.
	56.03	Review the general provisions of Florida laws relating to the operation of the ambulance.
	56.04	Discuss the guidelines for operating an ambulance safety during emergency and non-emergency situation/incident.
	56.05	Review considerations that are required for ensuring scene safety, including personal safety, patient safety, and traffic control.
	56.06	Review how to clean and disinfect the ambulance and equipment.
57.0		**Incident Management:** Demonstrate a fundamental depth, fundamental breadth of knowledge of establishing and working within the incident management system. The student will be able to:
	57.01	Discuss the importance of NIMS (National Incidence Management System) and its functional components.
	57.02	Discuss unified command and when it is applicable.
	57.03	Describe the role of command and the procedures for transfer of command.
	57.04	List and describe the functions of the following groups and leaders in ICS as it pertains to EMS incidents: • Safety

	• Logistics • Rehabilitation • Staging, • Treatment • Triage • Transportation • Extrication/rescue • Morgue • Communications
	57.05 Discuss the physical and psychological signs of critical incident stress.
58.0	**Multiple Casualty Incidents:** Demonstrate a simple depth, foundational breadth of knowledge of responding to an emergency during a multiple casualty incident. The student will be able to:
	58.01 Review essential elements of scene size-up when arriving at a potential MCI.
	58.02 Describe the role of the rescuers and EMS systems in planning for MCIs and disasters.
	58.03 Describe the role of the physician at multiple casualty incidents.
	58.04 Define triage and describe the principles of triage.
	58.05 Describe the START (simple triage and rapid treatment) and JUMP START method of initial triage.
	58.06 Describe techniques used to allocate patients to hospitals and track them.
	58.07 Discuss and describe the essential equipment to provide logistical support to MCI operations.
	58.08 Describe the role of critical incident stress management during and after MCIs.
	58.09 Demonstrate the use of local/regional triage tagging system.
59.0	**Air Medical:** Demonstrate a simple depth, simple breadth of knowledge of safe air medical operations and criteria for utilizing air medical response. The student will be able to:
	59.01 Describe key scene safety considerations when preparing for a helicopter medivac, including establishing a landing zone and approaching the aircraft.
	59.02 Describe the capabilities, protocols, and methods for accessing air medical transport.
	59.03 Review the advantages and disadvantages of air medical transport.
	59.04 Review the conditions/situations in which air medical transport should be considered.
60.0	**Vehicle Extrication:** Demonstrate a simple depth, simple breadth of knowledge for safe vehicle extrication and use of simple hand tools. The student will be able to:

60.01	Describe the role of the EMT in patient rescue and vehicle extrication
60.02	Describe personal and patient safety during vehicle extrication.
60.03	Explain the difference between simple access and complex access in vehicle extrication.
60.04	Discuss patient care considerations related to assisting with rapid extrication, providing emergency care to the trapped patient and removing and transferring a patient.
60.05	Discuss the use of simple hand tools used for vehicle extrication.
60.06	Discuss and describe the hazards and safe practices associated with the following vehicle components: • Energy absorbing bumpers • Air bag/supplemental restraint systems • Catalytic converters and conventional fuel systems • Stored energy • Hybrid-electric vehicles
60.07	Describe methods for emergency stabilization using rope, cribbing, jacks, spare tire, and come-a-longs for vehicles.
60.08	Describe the electrical hazards commonly found at highway incidents (above and below ground).
60.09	Explain the difference between tempered and safety glass, identify its locations on a vehicle and how to break it safely.
60.10	Explain typical door anatomy and methods to gain access to the patient.
61.0	**Hazardous Materials Awareness:** Demonstrate a simple depth, simple breadth of knowledge of risks and responsibilities of operating in a cold zone at a hazardous material or other special incident. The student will be able to:
61.01	Identify and describe resources for substance identification, decontamination, and treatment information, including but not limited to the following: • Poison control center • Medical control • Material safety data sheets (MSDS), • Reference textbooks • Computer databases • Computer-Aided Management of Emergency Operations (CAMEO) • CHEMTREC • Technical specialists • Agency for toxic substances and disease registry
61.02	Explain primary and secondary contamination risk.
61.03	Review routes of exposure.

61.04	Discuss how the substance and route of contamination alters triage and decontamination methods.
61.05	Explain the common signs, symptoms, and treatment for the following substances: • Corrosives • Pesticides • Chemical asphyxiants • Hydrocarbon solvents
61.06	Identify local facilities and resources capable of treating patients exposed to hazardous materials.
61.07	Determine the appropriate level of PPE by considering the following: • Types • Application • Use and limitations • Use of chemical compatibility chart
61.08	Explain specific decontamination procedures.
61.09	Discuss the designated HAZMAT control zones (HOT, WARM, and COLD).
61.10	Discuss an emergency two-step decontamination process.
61.11	Identify DOT Labels, placards and markings that are used to designate HAZMAT materials.
61.12	Demonstrate the ability to use a variety of reference materials to identify a HAZMAT material.
62.0	**Mass Casualty Incidents Due to Terrorism and Disaster:** Demonstrate a simple depth, simple breadth of knowledge of risks and responsibilities of operating on the scene of a natural or man-made disaster. The student will be able to:
62.01	Describe the role of the EMT on the scene of a natural or man-made disaster.
62.02	Define the different types of terrorism and provide examples of incidents of each.
62.03	Describe the factors related to ensuring situational safety at the site of a disaster and the procedures required.
62.04	Discuss the National Terrorism Advisory System.
62.05	Discuss factors to consider when responding to a terrorist situation.
62.06	Review important actions to take at the scene of a terrorist event such as: • Scene safety • Personal protection • Notification procedures • Available resources • Working with in the command system

62.07	List and describe the main categories of weapons of mass destruction.
62.08	Discuss the different types of chemical agents and their signs and symptoms.
62.09	Review the treatment and management of patients exposed to various types of chemical agents and radiation.
62.10	Review the different types of radiations and their effect on the human body.
62.11	Discuss the use of a nerve agent antidote kit.
Paramedic: Completion of intended (outcomes 63-126) lead to the student's eligibility to sit for the licensure exam for Paramedic.	
63.0	**EMS Systems:** Demonstrate a fundamental depth, foundational breadth of knowledge of the History of EMS and a complex depth, comprehensive breadth of knowledge of EMS Systems. The student will be able to:
63.01	Define terms, including but not limited to: EMS systems, licensure, registration, profession, professionalism, health care professional, ethics, peer review, medical direction, and protocols.
63.02	Knowledge of EMS History
63.03	Describe the attributes of a paramedic as a health care professional.
63.04	Explain paramedic licensure/certification, recertification, and reciprocity requirements in Florida.
63.05	Explain the importance of maintaining one's paramedic license/certification.
63.06	Describe the benefits of paramedic continuing education.
63.07	Discuss the role of national associations and of a national certification agency.
63.08	Discuss Chapter 401, Florida Statutes, and Chapter 64-E, Florida Administrative Code.
63.09	Discuss the roles of various EMS standard setting agencies.
63.10	Identify the standards (components) of an EMS System as defined by the National Highway Traffic Safety Administration.
63.11	Describe and demonstrate professional behaviors in the following areas: integrity, empathy, self-motivation, appearance and personal hygiene, self-confidence, communications, time management, teamwork and diplomacy, respect, patient advocacy, and careful delivery of service.
63.12	Describe the role of the EMS physician in providing medical direction.
63.13	Discuss examples of local protocols.
63.14	Differentiate between quality improvement and quality assurance.
63.15	Describe the relationship between a physician on the scene, the paramedic on the scene, and the EMS physician providing on-line medical direction.

	63.16 Describe the role of the paramedic relative to the safety of the crew, the patient, and bystanders.
	63.17 Assess personal practices relative to the responsibility for personal safety, the safety of the crew, the patient, and bystanders.
	63.18 Advocate the need for injury prevention.
	63.19 Discuss the diverse types of EMS services and differences in their provision of care, including mobile integrated health and community paramedic, and discuss the paramedics role in community risk reduction.
64.0	**Research:** Demonstrate a fundamental depth, foundational breath of knowledge of research principles to interpret literature and advocate evidence-based practice. The student will be able to:
	64.01 Interpret results and reach conclusions.
	64.02 Discuss the importance of evidenced based medicine and medical research and its role in refining EMS practices.
65.0	**Workforce Safety and Wellness:** Demonstrate a complex depth, comprehensive breadth of knowledge of workforce safety and wellness. The student will be able to:
	65.01 Discuss the concept of wellness and its benefits.
	65.02 Discuss how cardiovascular endurance, muscle strength, and flexibility contribute to physical fitness.
	65.03 Describe the impact of shift work on circadian rhythms.
	65.04 Discuss the role of risk assessments and warning signs in cancer and cardiovascular disease.
	65.05 Differentiate between proper from improper body mechanics for lifting and moving patients in emergency and non-emergency situations.
	65.06 Discuss the principles of crew resource management.
	65.07 Describe the problems that a paramedic might encounter in a hostile situation and the techniques used to manage the situation.
	65.08 Describe the equipment available for self-protection when confronted with a variety of adverse situations.
	65.09 Describe the three phases and factors that trigger the stress response.
	65.10 Differentiate between normal/ healthy and detrimental reactions to anxiety and stress.
	65.11 Identify and describe the defense mechanisms and management techniques and resources commonly used to deal with stress.
	65.12 Describe the components of critical incident stress management (CISM).
	65.13 Describe the needs of the paramedic when dealing with death and dying.
	65.14 Discuss the importance of standard precautions and body substance isolation practices.

	65.15 Discuss the principles of disease transmission and prevention measures
	65.16 Discuss the need to treat each patient as an individual, with respect and dignity.
	65.17 Discuss the need to respect the emotional needs of dying patients and their families.
	65.18 Discuss the paramedics' role in performing community risk assessment.
66.0	**Documentation:** Demonstrate a complex depth, comprehensive breadth of knowledge of the principles of medical documentation and report writing. The student will be able to:
	66.01 Identify the general principles regarding the importance of EMS documentation and ways in which documents are used.
	66.02 Demonstrate proper use of medical terminology.
	66.03 Record pertinent administrative information to a given standard.
	66.04 Analyze the documentation for accuracy and completeness, including spelling.
	66.05 Describe the differences between subjective and objective elements of documentation.
	66.06 Describe the potential consequences of illegible, incomplete, or inaccurate documentation.
	66.07 Describe the special considerations concerning patient refusal of transport.
	66.08 Explain how to properly record direct patient or bystander comments.
	66.09 Describe the special considerations concerning mass casualty incident documentation.
	66.10 Identify and record the pertinent, reportable clinical data of each patient interaction.
	66.11 Note and record pertinent negative clinical findings.
	66.12 Demonstrate proper completion of an EMS PCR (patient care record).
67.0	**EMS Communication:** Demonstrate a complex depth, comprehensive breadth of knowledge of EMS communication system. The student will be able to:
	67.01 Identify the role of verbal, written, and electronic communications in the provision of EMS.
	67.02 Describe the phases of communications necessary for an emergency response and transport.
	67.03 Discuss the importance of proper terminology when communicating during an emergency.
	67.04 Discuss factors that impede or enhance effective verbal and written communications.

	67.05 Discuss the legal implications of written communications.
	67.06 Identify the components of the local EMS communications system and describe their function and use.
	67.07 Identify and differentiate among the following communications systems: simplex, multiplex, duplex, trunked, digital communications, and cellular telephone.
	67.08 Describe the functions and responsibilities of the Federal Communications Commission.
	67.09 Describe how emergency medical dispatch (EMD) functions as an integral part of the EMS system.
	67.10 List appropriate information to be gathered by the telecommunicator.
	67.11 Demonstrate an organized and concise radio transmission
	67.12 Demonstrate an organized and concise patient report upon transfer of care.
68.0	**Therapeutic Communication:** Demonstrate a complex depth, comprehensive breadth of knowledge of the therapeutic communication principles. The student will be able to:
	68.01 Demonstrate health care literacy when communicating with patients.
	68.02 Identify internal and external factors that affect a patient/ bystander interview conducted by a paramedic.
	68.03 Review the strategies for developing patient rapport.
	68.04 Summarize the methods to assess mental status based on interview techniques.
	68.05 Discuss the strategies for interviewing difficult patients.
	68.06 Summarize developmental considerations Patients of all ages that influence patient interviewing.
	68.07 Review unique interviewing techniques necessary to employ with patients who have special needs.
	68.08 Discuss interviewing considerations used by paramedics in cross-cultural communications.
69.0	**Medical/Legal and Ethics:** Demonstrate a complex depth, comprehensive breadth of knowledge of medical legal and ethical concepts related to EMS. The student will be able to:
	69.01 Differentiate between legal and ethical responsibilities.
	69.02 Discuss State of Florida and Federal special reporting situations including: • Abuse • Sexual assault • Gunshot and knife wounds • Communicable disease • Animal bites

	69.03 Review terms, including but not limited to, the following: abandonment, battery, breach of duty, consent (expressed, implied, informed, voluntary), DNR orders, duty to act, emancipated minor, false imprisonment, liability, libel, negligence, proximate cause, scope of practice, slander, and tort.
	69.04 Differentiate between the scope of practice and the standard of care for paramedic practice.
	69.05 Discuss the concept of medical direction, including off-line medical direction and on-line medical direction, and its relationship to the standard of care of a paramedic.
	69.06 Review the four elements that must be present in order to prove negligence.
	69.07 Review the legal concept and limitations of immunity, including Good Samaritan statutes and governmental immunity, as it applies to the paramedic.
	69.08 Review the importance and necessity of patient confidentiality and the standards for maintaining patient confidentiality that apply to the paramedic.
	69.09 Review consent to include expressed, informed, implied, and involuntary.
	69.10 Discuss the importance of patient rights and advocating for the patient's best interest.
	69.11 Demonstrate appropriate patient management techniques in a refusal of care situation.
	69.12 Discuss the issues of abandonment, negligence, false imprisonment, and battery and their implications to the paramedic.
	69.13 Describe the actions that the paramedic should take to preserve evidence at a crime or accident scene.
	69.14 Describe the importance of providing accurate communication (oral and written) in substantiating an incident.
	69.15 Describe the criteria necessary to honor an advance directive in Florida.
70.0	**Anatomy and Physiology:** Integrate a comprehensive knowledge of anatomy and physiology of all human systems. The student will be able to:
	70.01 Review the EMT standards and benchmarks for the anatomy & physiology.
	70.02 Demonstrate comprehensive knowledge of anatomy and physiology as it applies to paramedic practice.
71.0	**Medical Terminology:** Integrate a comprehensive knowledge in the use of medical terminology and abbreviations into written and oral communication with health care professionals. The student will be able to:
	71.01 Review the EMT standards and benchmarks for medical terminology.
	71.02 Demonstrate a comprehensive knowledge of medical terminology as it applies to paramedic practice.
72.0	**Pathophysiology:** Demonstrate a complex knowledge of pathophysiology of major systems. The student will be able to:
	72.01 Describe the factors that precipitate disease in the human body including genetics familial diseases and risk factors.

	72.02 Describe environmental risk factors.
	72.03 Define and discuss the pathogenesis, signs, and symptoms of distributive, obstructive, neurogenic, anaphylactic, and septic shock.
	72.04 Discuss multiple organ dysfunction syndrome (MODS).
	72.05 Describe alterations in cells and tissues including cellular adaptation, cellular injury, manifestation of cellular injury, and cellular death/necrosis.
	72.06 Describe genetics and familial diseases and the role they play in pathophysiology.
	72.07 Describe the self-defense mechanisms of inflammation and immune responses and their relationships to pathophysiology.
73.0	**Life Span Development:** Integrate the knowledge of physiological and sociological changes throughout human development. The student will be able to:
	73.01 Compare, contrast, and analyze the physiological and psychosocial characteristics, patients of all ages.
74.0	**Public Health:** Demonstrate a fundamental knowledge of principles of public health. The student will be able to:
	74.01 Review the EMT standards and benchmarks for the public health.
	74.02 Apply a fundamental knowledge of the principles of public health, epidemiology, health promotion, and illness and injury prevention.
	74.03 Discuss human trafficking and the need to recognize potential victims.
	74.04 Review Electronic Health Records in EMS.
	74.05 Discuss the roles of governmental and nongovernmental agencies in public health.
	74.06 Review the mission and goals of public health.
	74.07 Discuss the social, geographic, economic, and demographic factors that influence public health.
	74.08 Demonstrate the ability to provide patient and community education on public health topics.
	74.09 Discuss unique concerns in the pediatric, geriatric, and special populations.
	74.10 Describe the role of EMS in health screenings, vaccinations, and immunizations.
	74.11 Discuss the impacts of the political, social, and economic environments on public health.
	74.12 Review the various types of infectious disease that are a threat to public health.
	74.13 Describe the various patient dispositions, choosing appropriate destinations, and transport modes.

	74.14 Define and understand bioinformatics and its role in EMS and public health.
	74.15 Analyze the principles and practices of Mobile Integrated Health in enhancing community healthcare delivery.
	74.16 Evaluate technology integration and data sharing in Mobile Integrated Health initiatives.
	74.17 Review the collaboration between EMS and other healthcare providers within Mobile Integrated Health frameworks.
	74.18 Demonstrate strategies for addressing the social determinants of health through Mobile Integrated Health Services.
	74.19 Evaluate the integration of community resources and services in the primary assessment process within Mobile Integrated Health.
	74.20 Review and understand substance abuse disorders and how they impact public health.
75.0	**Principles of Pharmacology:** Demonstrate a complex depth, comprehensive breadth of knowledge in the principles of pharmacology. The student will be able to:
	75.01 Discuss medication administration safety.
	75.02 Differentiate among the chemical, generic (nonproprietary), and trade (proprietary) names of a drug.
	75.03 List the four main sources of drug products.
	75.04 Describe how drugs are classified.
	75.05 List legislative acts controlling drug use and abuse in the United States.
	75.06 Differentiate among Schedule I, II, III, IV, and V substances.
	75.07 Use reference materials to research medications.
	75.08 Discuss standardization of drugs.
	75.09 Discuss investigational drugs, including the Food and Drug Administration (FDA) approval process and the FDA classifications for newly approved drugs.
	75.10 Discuss the paramedic's responsibilities and scope of practice pertinent to the administration of medications.
	75.11 Review best practices and legal requirements for the storage and security of medications.
	75.12 List and describe available drug forms.
	75.13 List and differentiate all methods and routes of medication administration covered in the current National EMS Scope of Practice Model.

	75.14 Describe the process of: • Pharmacokinetics • Pharmacodynamics • Theories of drug action • Drug-response relationship • Factors altering drug responses • Predictable drug responses • Iatrogenic drug responses • Unpredictable adverse drug responses
	75.15 Discuss the prevention, recognition and management of adverse medication reactions.
	75.16 Discuss the prevention, recognition and management of medication interactions.
	75.17 Select the optimal medication and method of medication administration for patients with a particular clinical condition or situation.
76.0	**Medication Administration:** Demonstrate a complex depth, comprehensive breadth of knowledge of medication administration within the scope of practice of the paramedic. The student will be able to:
	76.01 Review the specific anatomy and physiology pertinent to medication administration.
	76.02 Discuss the paramedic's responsibilities and scope of practice pertinent to the administration of medications.
	76.03 Review mathematical principles and demonstrate equations necessary for performing drug calculations. ***Include resources for safe administration of weight-based dosing.***
	76.04 Describe the indications, contraindications, procedure, equipment and risks associated with peripheral intravenous or external jugular access.
	76.05 Describe the indications, equipment needed, technique used, precautions, and general principles of intraosseous needle placement and infusion.
	76.06 Describe complications that can occur as a result of IV therapy.
	76.07 Review ***medication cross-check procedure and*** the "six rights" of drug administration and correlate these with the principles of medication administration.
	76.08 Describe the use of standard precautions and body substance isolation (BSI) procedures when administering a medication.
	76.09 Prepare medications for administration from a variety of types of packaging, including vials, non-constituted vials, ampules, prefilled syringes, and packaging for intravenous solutions.
	76.10 Describe the role of medical direction in medication administration and describe the difference between direct orders (online) and standing orders (off-line).

76.11	Describe the indications, equipment needed, techniques used, precautions, and general principles of administering medications by the following routes: • Inhalation route • Gastric tube • Rectal route
76.12	Differentiate among the different percutaneous routes of medication administration.
76.13	Describe the purpose, equipment needed, techniques used, complications, and general principles for obtaining a blood sample.
76.14	Obtain venous and capillary blood for testing and discuss blood chemistry and normal values.
76.15	Demonstrate principles of medical asepsis in the administration of medications.
76.16	Demonstrate the procedure for disposal of contaminated items and supplies.
76.17	Demonstrate cannulation of peripheral, intravenous and/or external jugular veins.
76.18	Demonstrate intraosseous access.
76.19	Demonstrate administration of medications by the following routes: • Oral • Sublingual • Buccal • Auto-injector • Inhalation route • Intranasal route. • Subcutaneous route. • Intramuscular route. • Intravenous route. • Intraosseous route.
77.0	**Emergency Medications:** Demonstrate a complex depth, comprehensive breadth of knowledge of emergency medications within the scope of practice for the paramedic. The student will be able to:

	77.01 Discuss medications ***acute and maintenance/chronic***) used by the paramedic, including indications, ***name, effects, medication action, routes of administration***, contraindications, dosages, adverse reactions, side effects, ***complications*** and interactions for the following: • Airway management • Respiratory • Cardiovascular • Neurologic conditions • Gastrointestinal • Miscellaneous medications • Pain management • Discuss polypharmacy
78.0	**Airway Management:** Demonstrate a complex depth, comprehensive breadth of knowledge of airway management within the scope of practice of the paramedic, patients of all ages. The student will be able to:
	78.01 Explain the primary objective of airway maintenance. ***To include proper airway assessment and techniques of assuring a patient airway.***
	78.02 Explain the differences in airway anatomy.
	78.03 Define, identify and describe a tracheostomy, laryngectomy, stoma, and tracheostomy tube.
	78.04 Describe the special considerations in airway management and ventilation for the pediatric patient.
	78.05 Describe the indications, contraindications, advantages, disadvantages, complications and equipment for rapid sequence intubation with neuromuscular blockade.
	78.06 Identify neuromuscular blocking drugs and other agents used in rapid sequence intubation.
	78.07 Describe the indications, contraindications, advantages, disadvantages, complications and equipment for sedation during intubation.
	78.08 Describe the indications, contraindications, advantages, disadvantages and complications for performing cricothyrotomy.
	78.09 Demonstrate the procedure for percutaneous cricothyrotomy.
	78.10 Review the function of the structures located in the upper and lower airway.
	78.11 Demonstrate effective techniques of advanced airway management of the following: • Orotracheal, • Nasotracheal, • Subglottic, • Supraglottic, • Digital intubation
	78.12 Describe and demonstrate methods of assessment for confirming correct placement of any airway device.

	78.13 Describe the indications, contraindications, advantages, disadvantages, complications, equipment and technique for extubation.
79.0	**Respiration:** Demonstrate a complex depth, comprehensive breadth of knowledge of respiration within the scope of practice of paramedic, patients of all ages. The student will be able to:
	79.01 List the concentration of gases that comprise atmospheric air.
	79.02 Describe the measurement of oxygen in the blood.
	79.03 Describe the measurement of carbon dioxide in the blood.
	79.04 Describe peak expiratory flow.
	79.05 Describe factors that cause decreased oxygen concentrations in the blood.
	79.06 Describe the factors that increase and decrease carbon dioxide production in the body.
	79.07 Define pulsus paradoxus.
	79.08 Describe the indications, contraindications, advantages, disadvantages, complications, liter flow range, and concentration of delivered oxygen for supplemental oxygen delivery devices.
	79.09 Review the anatomy, physiology and pathophysiology of ventilation and respiration to include • Pulmonary ventilation • Oxygenation • Respiration • External • Internal • Cellular
	79.10 Discuss assessment and management of adequate and inadequate respiration to include, Supplemental oxygen therapy.
80.0	**Ventilation:** Demonstrate a complex breadth, comprehensive breadth of knowledge of ventilatory assessment and management, patients of all ages. The student will be able to:
	80.01 Perform and interpret pulse oximetry and capnography.
	80.02 Describe indications, contraindications, advantages, disadvantages, complications, and technique for ventilating a patient with an automatic transport ventilator (ATV), BIPAP/CPAP, AND PEEP devices.
	80.03 Assessment and management of adequate and inadequate ventilation to include effect on ventilation on cardiac output.
81.0	**Scene Size-Up:** Demonstrate a complex depth, comprehensive breadth of knowledge of scene management. The student will be able to:
	81.01 Describe common hazards found at the scene of a trauma and a medical patient.
	81.02 Discuss common mechanisms of injury/nature of illness. ***(MOI/NOI)***.

	81.03 Explain the rationale for crew members to evaluate scene safety prior to entering.
	81.04 Demonstrate the scene-size-up to include: • Scene safety/situational awareness • Scene management • Impact of the environment on patient care • Addressing hazards • Violence • Need for additional or specialized resources • Standard precautions • Multiple patient situations
82.0	**Primary Assessment:** Demonstrate a complex depth, comprehensive breadth of knowledge of the primary assessment for all patient situations. The student will be able to:
	82.01 Summarize the elements of a general impression of the patient.
	82.02 Explain the reason for performing a primary assessment.
	82.03 Discuss and demonstrate methods of assessing levels of responsiveness using AVPU.
	82.04 Discuss and demonstrate methods of assessing the airway: patients of all ages.
	82.05 Describe and demonstrate methods used for assessing if a patient is breathing patients of all ages.
	82.06 Differentiate between a patient with adequate and inadequate breathing.
	82.07 Describe and demonstrate the methods used to obtain a pulse, patients of all ages.
	82.08 Discuss and demonstrate assessing the patient for external bleeding.
	82.09 Describe and demonstrate the assessment and interruption of skin color, temperature, moisture, and capillary refill, patients of all ages.
	82.10 Explain the reasons for prioritizing a patient for care and transport.
	82.11 Describe when it is appropriate to expose the patient completely.
	82.12 Differentiate between critical, potentially, and non-life-threatening patient presentations and integration of treatment/procedures needed to preserve life.
83.0	**History Taking:** Demonstrate a complex depth, comprehensive breath of knowledge of the components of history taking. The student will be able to:
	83.01 Determine and investigate the chief complaint. ***(i.e., MOI, NOI).***
	83.02 Describe the components of the patient history.

	83.03 Explain the importance of obtaining a SAMPLE and OPQRST history.
	83.04 Acknowledge the feelings patients experience during assessment.
	83.05 Discuss the value of obtaining a family and social history.
	83.06 Describe examples of different techniques ***(i.e., therapeutic communication and adaptive interview techniques)*** the paramedic may use to obtain information from patients, family, or bystanders during the history taking process.
	83.07 Analyze the impact of cultural and linguistic factors on history-taking in diverse patient populations served by Mobile Integrated Health.
	83.08 Evaluate the use of technology, such as electronic health records and telemedicine, to enhance the history-taking process within MIH.
	83.09 Discuss the importance of integrating community resources and support systems into the patient's history to inform care planning.
	83.10 Demonstrate the ability to identify and address potential mental health concerns during the history-taking process in MIH settings.
	83.11 Explain the significance of continuity of care in history-taking and how it influences treatment decisions and patient outcomes in Mobile Integrated Health.
84.0	**Secondary Assessment:** Demonstrate a complex depth, comprehensive breadth of knowledge of techniques used for a secondary assessment, patients of all ages. The student will be able to:
	84.01 Review EMT standards and benchmarks for secondary assessment. (***i.e., assessment of vital signs, pain, techniques of physical exam).***
	84.02 Describe the techniques of inspection, palpation, percussion, and auscultation.
	84.03 Discuss the limitations of conducting a physical exam in the out-of-hospital environment.
	84.04 Demonstrate the examination of the patient including all major body systems and anatomical regions.
	84.05 Distinguish the importance of abnormal assessment findings in all the major body systems and anatomical regions.
	84.06 Describe the evaluation of patient’s perfusion status based on findings in the initial assessment.
	84.07 State the reasons for performing a rapid trauma assessment.
	84.08 Discuss the reason for performing a focused history and physical exam.
	84.09 Discuss appropriate gender and cultural considerations regarding assessment.
	84.10 Discuss medical identification devices/ systems.
85.0	**Monitoring Devices:** Demonstrate a fundamental depth, foundational breadth of knowledge of monitoring devices within the scope of practice of the paramedic. The student will be able to:

	85.01 Describe the purpose, indications, procedure, normal findings, and limitations of the following patient monitoring technologies, including but not limited to: • Continuous ECG monitoring • 12-Lead ECG • ***$EtCO_2$*** capnography (wave form) Methemoglobin monitoring • Total hemoglobin • Basic blood chemistry • Ultrasound • Other devices identified at the EMT level
	85.02 Demonstrate the use of the following patient monitoring technologies, including but not limited to: • Continuous ECG monitoring • 12-Lead ECG ***(i.e., acquisition, interpretation, and transmission***). • Capnography (wave form) • Other devices identified at the EMT level
86.0	**Reassessment:** Demonstrate a complex depth, comprehensive breadth of knowledge of how and when to perform a reassessment for all patient situations. The student will be able to:
	86.01 Describe the components of reassessment and demonstrate the skills involved.
	86.02 Discuss the reasons for reassessment ***of the patient.***
	86.03 Explain trending assessment components and its value to other health professionals who assume care of the patient.
	86.04 Demonstrate reassessment of patients of all ages.
87.0	**Medical Overview:** Demonstrate a complex depth, comprehensive breadth of knowledge of pathophysiology, assessment, and management of medical complaints. The student will be able to:
	87.01 Identify factors that complicate patient assessment including: • Scene safety • Environmental factors • Chief complaint • Paramedic preconceptions • Distracting injuries • Tunnel vision • Patient cooperation • Paramedic attitude
	87.02 Discuss forming a field impression and utilizing available information to determine a different diagnosis.

	87.03 Discuss pathophysiology, assessment, and management of medical complaints to include. • Transport mode • Destination decisions
88.0	**Neurology:** Demonstrate a complex depth, comprehensive breadth of knowledge of neurologic disorders/emergencies, patients of all ages. The student will be able to:
	88.01 Identify the risk factors associated with nervous system dysfunction.
	88.02 Review the anatomy and physiology of the organs and structures related to the nervous system.
	88.03 Discuss the pathophysiology, signs and symptoms and demonstrate the assessment and management of patients with the following neurological conditions, including but not limited to: • Coma • Decreased level of responsiveness • Seizures • Syncope • Transient ischemic attack • Stroke and intracranial hemorrhage • Degenerative neurologic diseases ***(i.e., dementia, Alzheimer's and Parkinson's disease)*** • Chronic alcoholism • Back disorders • Headache • Brief Resolved Unexplained Event (BRUE) • Hydrocephalus – CSF diversion devices or shunts • Other neurological disorders to be determined locally
	88.04 Describe and differentiate the major types of seizures.
	88.05 Describe the types of stroke.
	88.06 Describe the significance of the prevalence of neurologic disorders in the United States.
	88.07 Discuss screen tools for assessment of stroke and large vessel occlusion.
	88.08 Demonstrate the use of stroke screening tools and appropriate decision-making regarding transport destination for a stroke patient.
89.0	**Abdominal and Gastrointestinal Disorders:** Demonstrate a complex depth, comprehensive breadth of knowledge of abdominal and gastrointestinal disorders/emergencies, patients of all ages. The student will be able to:
	89.01 Review the anatomy and physiology of the organs and structures related to gastrointestinal diseases.
	89.02 Differentiate between hemorrhagic and non-hemorrhagic causes of abdominal pain.
	89.03 Describe the technique for performing a comprehensive physical examination on a patient complaining of abdominal pain.

	89.04 Discuss the pathophysiology, signs, and symptoms, and demonstrate the assessment, and management of patients with the following abdominal and gastrointestinal disorders, including but not limited to: • Both upper and lower gastrointestinal bleeding • Acute gastroenteritis. • Colitis. • Diverticulitis. • Appendicitis. • Peptic ulcer disease. • Bowel obstruction. • Crohn's disease. • Pancreatitis. • Esophageal varices. • Hemorrhoids. • Cholecystitis. • Acute hepatitis.
	89.05 Identify patients at risk for gastrointestinal emergencies.
	89.06 Demonstrate how to auscultate the abdomen to assess for diminished, absent or abnormal bowel sounds.
90.0	**Immunology:** Demonstrate a complex depth, comprehensive breadth of knowledge of immunology disorders/emergencies, patients of all ages. The student will be able to:
	90.01 Define and differentiate: • Allergic reaction. • Anaphylaxis • Antigens • Antibodies • Anaphylactoid reaction
	90.02 Review the anatomy and physiology of the organs and structures related to anaphylaxis.
	90.03 Describe the prevention of anaphylaxis and appropriate patient education.
	90.04 Review the pathophysiology of allergy and anaphylaxis.
	90.05 Describe the common methods of entry of allergens into the body.
	90.06 Review common antigens most frequently associated with anaphylaxis.
	90.07 Differentiate among the various treatment and pharmacological interventions used in the management of anaphylaxis and allergic reaction.
91.0	**Infectious Diseases:** Demonstrate a complex depth, comprehensive breadth of knowledge of assessment and management of a patient who may have an infectious disease, patient of all ages. The student will be able to:

	91.01 Review EMT standards and benchmarks for infectious disease.
	91.02 Review the specific anatomy and physiology pertinent to infectious and communicable diseases.
	91.03 Describe the steps of an infectious process.
	91.04 Describe and differentiate infectious agents, including bacteria, viruses, fungi, protozoans, and helminths (worms).
	91.05 Review characteristics of the immune system.
	91.06 Perform an assessment of a patient with an infectious/communicable disease.
	91.07 Effectively and safely manage a patient with an infectious/communicable disease.
	91.08 Review public health principles related to infectious disease.
	91.09 Review the roles of local, state, and federal agencies involved in infectious disease surveillance and outbreaks.
	91.10 Describe the interactions of the agent, host, and environment as determining factors in disease transmission.
	91.11 Describes the EMS professional's responsibilities as well as their rights under the Ryan White Act.
	91.12 Discuss the pathophysiology, signs, symptoms, assessment, and management and risk factors of significant health concerns.
	91.13 Discuss the characteristics of, and organisms associated with, febrile and afebrile respiratory disease.
	91.14 Describe the EMS provider's role in patient education and preventing disease transmission.
	91.15 Review the pathophysiology, risk factors, assessment, and prehospital management of sepsis/systemic inflammatory response syndrome (SIRS).
	91.16 Knowledge of: • Antibiotic resistance infections • Vaccine-preventable diseases • Emerging infectious disease
92.0	**Endocrine Disorders:** Demonstrate a complex depth, comprehensive breadth of knowledge in endocrine disorders/emergencies, patients of all ages. The student will be able to:
	92.01 Identify the risk factors related to disorders of the endocrine system.
	92.02 Review the anatomy and physiology of organs and structures related to endocrinologic diseases.

	92.03 Discuss the pathophysiology, signs and symptoms and demonstrate the assessment, and management of patients with the following endocrinologic emergencies: • Hypoglycemia • Hyperglycemia • Diabetic ketoacidosis • Cushing's syndrome • Adrenal insufficiency • Pituitary disorders • Thyroid disorders
93.0	**Psychiatric Cognitive and Behavioral:** Demonstrate a complex depth, comprehensive breadth of knowledge regarding the assessment and management of psychiatric disorders, cognitive and behavioral emergencies, patients of all ages. The student will be able to:
	93.01 Differentiate among behavior, psychiatric disorders, and behavioral emergencies.
	93.02 Basic principles of the mental health system • Patterns of violence, abuse, and neglect • Suicide ideation • Excited delirium • Anxiety • Depression • Medical fear • Substance use disorder/ addictive behavior. • PTSD • Acute psychosis • Cognitive disorders • Thought disorders (Mood disorders, Neurotic disorders, Somatoform disorders, Factitious disorders) • Personality disorders
	93.03 Discuss the pathophysiology of common psychiatric disorders and behavioral emergencies.
	93.04 Discuss the general factors that may cause an alteration in a patient's behavior.
	93.05 Discuss the factors/signs or symptoms of various psychiatric emergencies to include suicide.
	93.06 Manage a behavioral emergency scenario applying knowledge of medical/legal Florida Statutes.
	93.07 Describe and demonstrate the assessment and management of the patient experiencing a behavioral or psychiatric emergency.
	93.08 Describe the biological, psychosocial, and sociocultural influences on psychiatric disorders.
	93.09 Describe the special considerations for the safety of the EMS provider, and EMS crew, the patient and bystanders when dealing with behavioral and psychiatric emergencies.

	93.10 Explain the importance of provider behavior and communication in the care of a patient with a behavioral emergency.
	93.11 Describe and demonstrate methods of restraint that may be used in the management of a patient with a behavioral emergency and possible legal implication.
	93.12 List the risk factors (including behaviors) for suicide.
94.0	**Cardiovascular:** Demonstrate a complex depth, comprehensive breadth of knowledge of cardiovascular disorders/emergencies, patients of all ages. The student will be able to:
	94.01 Describe the epidemiology, incidence, morbidity and mortality of cardiovascular disease.
	94.02 Identify the risk factors of coronary artery disease.
	94.03 Review the anatomy and physiology of the heart and circulatory system.
	94.04 Discuss the electrophysiology of the heart.
	94.05 Discuss and demonstrate ECG monitoring, 12 Lead placement, acquisition, and interpretation.
	94.06 Define and give examples of positive and negative inotropes, chronotropes and dromotropes.
	94.07 Identify the normal characteristics of the point of maximal impulse (PMI).
	94.08 Discuss the normal and abnormal heart sounds and how they relate to hemodynamic events in the cardiac cycle.
	94.09 Describe a systematic approach to the analysis and interpretation of cardiac dysrhythmias.
	94.10 Describe the conditions of pulseless electrical activity.
	94.11 Compare and contrast electrotherapy to include pacing.

	94.12	Discuss the pathophysiology, signs and symptoms and demonstrate the assessment, and management of patients following conditions including the development of a treatment plan, including but not limited to: • Angina • Myocardial infarction STEMI/Non-STEMI • Congestive heart failure • Cardiac tamponade • Cardiogenic shock • Hypertension and acute hypertensive states • Cardiac arrest • Vascular disorders • Hypertrophic cardiomyopathies • Infectious diseases of the heart • Congenital abnormalities • Thromboembolism • Aortic aneurysm/dissection • LVAD • Heart Transplant
	94.13	List other clinical conditions that may mimic signs and symptoms of coronary artery disease and angina pectoris.
	94.14	Compare fibrinolysis from percutaneous intervention as reperfusion techniques used in patients with AMI or suspected AMI and describe the "window of opportunity" as it pertains to reperfusion of a myocardial infarction.
	94.15	List the characteristics of a patient eligible for thrombolytic therapy.
	94.16	Define the term acute pulmonary edema and describe its relationship to left ventricular failure.
	94.17	Discuss preload, afterload and left ventricular end-diastolic pressure and relate each to the pathophysiology of heart failure.
	94.18	Identify non-cardiac causes of cardiac arrest.
	94.19	Discuss the components of post resuscitation care including how to determine the return of spontaneous circulation (ROSC).
	94.20	Identify circumstances and situations where resuscitation efforts would not be initiated or would be terminated.
	94.21	Conditions that predispose patients to cardiac rhythm disturbances including WPW, Brugada, long QT syndrome and others
	94.22	Understand the principles of mean arterial pressure and the components used to calculate the pressure.
95.0	**Toxicology:** Demonstrate a complex depth, comprehensive breadth of knowledge of the assessment and management of toxicology emergencies including psychosocial aspects of age-related assessment and treatment modifications for the major or common diseases and patients of all ages. The student will be able to:	
	95.01	Define and differentiate among toxicology, poisoning, and overdose.

95.02	Describe the pathophysiology and signs and symptoms of the following toxicological emergencies, including but not limited to: • Food poisoning • Carbon monoxide poisoning • Cyanide poisoning • Exposure to acid or alkaline substance • Exposure to hydrocarbons • Methanol ingestion • Isopropanol ingestion • Ethylene glycol ingestion • Exposure to poisonous substances • Drug withdrawal • Alcoholic syndrome • Withdrawal syndrome (including delirium tremens) • Illicit drug use • Medication overdose • Opioid overdose • Organa phosphate overdose • Toxidromes • Cholinergic • Anticholinergic • Sympathomimetic • Sedative / hypnotics • Opioid • Corrosive • Knockdown
95.03	Discuss the role of the Poison Control Center with the nationwide contact number 800-222-1222 in the United States.
95.04	Review various ways that toxins enter the body.
95.05	Discuss and demonstrate the assessment and management for the patient with a toxicological emergency.
95.06	Explain the rationale for contacting medical direction early in the prehospital management of a patient with a toxicological emergency.

	95.07 Review the following for Narcan (naloxone): • Generic and trade names • Medication forms • Dose • Administration • Contraindications • Medications • Drugs of Abuse • Non-FDA approved medications and supplements • Serotonin Syndrome • Malignant Hyperthermia
96.0	**Respiratory:** Demonstrate a complex depth, comprehensive breadth of knowledge of the assessment and management of respiratory disorders, include psychosocial aspects of age-related assessment and treatment modifications for the major or common diseases and/ or emergencies associated with emergencies, patients of all ages. The student will be able to**:**
	96.01 Discuss the epidemiology, morbidity, and mortality of respiratory illness in the United States.
	96.02 Review hypoventilation and hyperventilation and outline the conditions with which they are often associated.
	96.03 Review the anatomy, physiology and functions of the respiratory system.
	96.04 Discuss those factors that contribute to the formation of a general impression and degree of respiratory distress.
	96.05 Identify breathing patterns that are associated with respiratory distress and neurologic insults and their correlation with the signs of increased work of breathing.
	96.06 Review between normal and abnormal breath/lung sounds and its physiologic significance.
	96.07 Explain the concepts of hypoxic drive and auto-PEEP as they relate to the COPD patient.

96.08 Discuss the pathophysiology, signs and symptoms and demonstrate the assessment, and management of patients with the following respiratory conditions, including but not limited to:

- Pulmonary infections (upper and lower airway)
- Atelectasis
- Anatomic or foreign body obstruction
- Aspiration
- Asthma
- Emphysema
- Chronic bronchitis
- Spontaneous pneumothorax
- Pleural effusion
- Pulmonary embolism
- Cancer
- Toxic inhalations
- Pulmonary edema
- Acute respiratory distress syndrome (ARDS)
- Pneumonia
- Neoplasms of the lung
- Hyperventilation syndrome
- Upper airway disease
- RSV
- Croup
- Epiglottitis
- COPD
- Broncho pulmonary dysplasia
- Respiratory Distress
- Respiratory Failure
- Respiratory Arrest
- Pulmonary Hypertension

97.0 **Hematology:** Demonstrate a complex depth, foundational breadth of knowledge of the assessment, and management of hematology disorders/emergencies, patients of all ages. The student will be able to:

97.01 Identify the role of heredity in the risk for hematologic disorders.

97.02 Review the anatomy and physiology of the hematopoietic system.

97.03 Describe volume and volume-control related to the hematopoietic system.

97.04 Explain the significance of the hematocrit with respect to red cell size and number.

	97.05 Explain the correlation of the RBC count, hematocrit and hemoglobin values.
	97.06 Recognize medications used to decrease the risk of thrombosis.
	97.07 Identify blood groups.
	97.08 Discuss the pathophysiology, signs and symptoms and demonstrate the assessment, and management of patients with the following conditions, including but not limited to: • Anemia • Leukemia • Lymphomas • Polycythemia • Disseminated intravascular coagulopathy • Hemophilia • Sickle cell disease • Multiple myeloma • Leukopenia/neutropenia • Leukocytosis • Thrombocytosis • Thrombocytopenia • Transfusion complications • Hemostatic disorders
98.0	**Genitourinary/Renal:** Demonstrate a complex depth, comprehensive breadth of knowledge of genitourinary and renal emergencies to include psychosocial aspects of age-related assessment and treatment modifications for the major or common diseases and/or emergencies, patients of all ages. The student will be able to:
	98.01 Describe the epidemiology, incidence, morbidity, mortality, and risk factors of urological emergencies.
	98.02 Review the anatomy and physiology of the organs and structures related to urogenital diseases.
	98.03 Discuss referred pain and visceral pain as it relates to urology.

	98.04 Discuss the pathophysiology, signs and symptoms and demonstrate the assessment, and management of patients of the following urologic and renal conditions, including but not limited to: • Acute renal failure • Chronic renal failure • Complications related to hemodialysis and peritoneal dialysis. • Renal calculi • Priapism • Testicular torsion • Urinary tract infection • Complications related to urinary catheter management (not insertion) • Sexual assault (female and male) • Infection • Male genital tract conditions
	98.05 Review fluids, electrolytes, and acid-based disturbances.
99.0	**Gynecology:** Demonstrate a complex depth, comprehensive breadth of knowledge of the assessment findings and the management of gynecology disorders Include psychosocial aspects of age-related assessment and treatment modifications for the major or common diseases and/or /emergencies, patients of all ages. The student will be able to:
	99.01 Review anatomy and physiology of the female reproductive system.
	99.02 Identify the normal events of the menstrual and ovarian cycle.
	99.03 Discuss the pathophysiology, signs and symptoms and demonstrate the assessment, and management of patients with specific gynecological emergencies, including but not limited to: • Infection (including Pelvic inflammatory disease, Bartholin's abscess, and vaginitis/ vulvovaginitis) • Ovarian Cyst and ruptured ovarian Cyst • Ovarian torsion • Endometriosis • Dysfunctional uterine bleeding • Prolapsed uterus • Vaginal foreign body • Vaginal Hemorrhage
	99.04 Describe the importance of maintaining a patient's modesty and privacy while still being able to obtain necessary information.
	99.05 Discuss the need to provide care for a patient of sexual assault, while still preventing destruction of crime scene information.
100.0	**Non-Traumatic Musculoskeletal Disorders:** Demonstrate a fundamental depth, foundation breadth of knowledge of the assessment and management of non-traumatic fractures, patients of all ages. The student will be able to:

	100.01 Review the anatomy and physiology of the musculoskeletal system.
	100.02 Discuss the pathophysiology, signs and symptoms and demonstrate the assessment and management of patients with musculoskeletal emergencies, including but not limited to: • Osteomyelitis and tumors • Disc disorders, lower back pain (cauda equine syndrome, sprain, and strain.) • Joint abnormalities • Muscle abnormalities • Overuse syndrome • Soft tissue infections • Non-traumatic fractures • Disorders of the spine • Rhabdomyolysis
101.0	**Diseases of the Eyes, Ears, Nose, and Throat:** Demonstrate a fundamental depth, foundational breadth of knowledge of the assessment and management of common or major diseases of the eyes, ears, nose and throat, patients of all ages. The student will be able to:
	101.01 Review the anatomy and physiology of the eyes, ears, nose, and throat.
	101.02 Discuss the pathophysiology, signs, and symptoms and demonstrate the assessment and management of patients with various eye diseases/injuries, including but not limited to: • Burns of eye and adnexa • Conjunctivitis • Corneal abrasions • Foreign body • Inflammation of the eyelid • Glaucoma • Hyphemia • Iritis • Papilledema • Retinal detachment and defect • Cellulitis of orbit
	101.03 Discuss the pathophysiology, signs, and symptoms and demonstrate the assessment and management of patients with various ear diseases/injuries including: • Foreign body • Impacted cerumen • Labyrinthitis • Meniere's disease • Otitis external and media • Perforated tympanic membrane

101.04	Discuss the pathophysiology, signs, and symptoms and demonstrate the assessment and management of patients with various nose diseases/injuries including: • Epistaxis • Foreign body intrusion • Rhinitis • Sinusitis
101.05	Discuss the pathophysiology, signs and symptoms and demonstrate the assessment and management of patients with oropharynx/throat diseases/injuries including: • Dentalgia and dental abscess • Diseases of oral soft tissue/ Ludwig's angina • Foreign body intrusion • Epiglottitis • Laryngitis • Tracheitis • Oral candidiasis • Peritonsillar abscess • Pharyngitis/tonsillitis • Temporomandibular joint disorders
102.0	**Shock:** Demonstrate the integration of a comprehensive knowledge of causes and pathophysiology into the management of shock (Include psychosocial aspects of age- related assessment and treatment modifications for pediatric and geriatric patients). The student will be able to:
102.01	Essential components in normal perfusion and Physiologic response
102.02	Define and differentiate between compensated and decompensated shock for all types of shock.
102.03	Review the pathophysiology and demonstrate the assessment and management of the types of shock • Distributive, Neurogenic, Psychogenic, Hemorrhagic, and Obstructive
102.04	Describe the epidemiology, including premorbid and comorbid conditions and prevention strategies, for shock and hemorrhage.
102.05	Review the anatomy and physiology of the cardiovascular and respiratory systems.
102.06	Contrast the physiology of blood flow during normal states, peri-arrest, cardiac arrest and shock.
102.07	Discuss and demonstrate the assessment and management of shock.
102.08	Review the management of hemorrhage. • Discuss and demonstrate the assessment and management of internal hemorrhage • Discuss and demonstrate the assessment and management of external hemorrhage • Review the stages and classifications of hemorrhage.
102.09	Circulatory assist devices

	102.10 Discuss appropriate fluid management.
	102.11 Describe the effects of decreased perfusion at the capillary level.
	102.12 Relate pulse pressure changes to perfusion status.
	102.13 Relate orthostatic vital sign changes to perfusion status.
	102.14 Discuss and differentiate the physiological manifestations of shock patients of all ages.
103.0	**Resuscitation from Cardiac Arrest:** Demonstrate the integration of a comprehensive knowledge of causes and pathophysiology into the management of cardiac arrest and respiratory failure (Include psychosocial aspects of age- related assessment and treatment modifications for pediatric and geriatric patients). The student will be able to:
	103.01 Review the following for the cardiac arrest victim**:** • Epidemiology • CPR Pathophysiology • Physiology of blood flow during external chest compressions • Resuscitation success/research • Ethical issues in resuscitation
	103.02 Describe the epidemiology, including premorbid and comorbid conditions and prevention strategies, for Cardiac Arrest. • Termination of resuscitation
	103.03 Review defibrillation and cardioversion to include manual techniques, automatic and semi-automated devices. • Resuscitation system components
	103.04 Discuss causes, pathophysiology, signs, and symptoms and management of special arrest and peri-arrest conditions, including but not limited to: • Electrolyte disorders • Toxic exposures • Drowning • Hypothermia • Near-Fatal Asthma • Anaphylaxis • Trauma • Pregnancy • Electrical shock and lightning strikes
	103.05 Review post resuscitative care include, temperature regulation, glucose/electrolyte management.
104.0	**Trauma Overview:** Demonstrate a complex depth, comprehensive breadth of knowledge of pathophysiology, assessment, and management of trauma patients, patients of all ages. The student will be able to:
	104.01 Review the pathophysiology of the trauma patient.

	104.02 Review the components of comprehensive trauma systems and levels of trauma centers.
	104.03 Review the considerations for different transportation modes to a trauma center.
	104.04 Discuss the kinematics of blunt and penetrating trauma.
	104.05 Discus and describe significant and non-significant mechanism of injury (MOI) and provide examples of each.
	104.06 Discuss and demonstrate the application of State of Florida's trauma scorecard methodologies as required in Florida Statute (F.S.) and Florida Administrative Code (F.A.C).
	104.07 Review the National Trauma Triage Protocol of Injured Patients.
	104.08 Review forming a field impression and utilizing available information to determine a differential diagnosis.
	104.09 Review the need for rapid intervention transport of the trauma patient.
105.0	**Multi-Systems Trauma:** Demonstrate a complex depth, comprehensive breadth of knowledge of multi-system trauma and blast injuries. The student will be able to:
	105.01 Review the priority of care in the multisystem trauma patient.
	105.02 Identify and Explain Blast Injuries
	105.03 Explain which ALS interventions should occur prior to a transport decision and during transport.
106.0	**Bleeding:** Demonstrate a complex depth, comprehension breadth of knowledge of pathophysiology, assessment and management of bleeding, patients of all ages. The student will be able to:
	106.01 Review the compensatory mechanism in hemorrhagic shock.
	106.02 Review the administration of medications to assist in the maintenance of homeostasis.
	106.03 Review the maintenance of tissue oxygenation in a bleeding patient.
	106.04 Discuss appropriate fluid resuscitation for the patient in hemorrhagic shock.
	106.05 Review the different methods/modalities of controlling bleeding.
107.0	**Chest Trauma:** Demonstrate a complex depth, comprehensive breadth of knowledge of pathophysiology, assessment, and management of chest trauma, patients of all ages. The student will be able to:
	107.01 Review the anatomy and physiology of the organs and structures related to thoracic injuries. • Blunt vs Penetrating Mechanisms

	107.02 Review the pathophysiology, signs and symptoms and mechanism of injury (MOI) of the following injuries, including but not limited to:
	• Myocardial injuries
	  ○ pericardial tamponade
	  ○ myocardial contusion
	  ○ myocardial rupture
	• Vascular injury
	  ○ aortic dissection
	  ○ pulmonary contusion
	• Hemothorax
	• Pneumothorax
	• Hemopneumothorax
	• Cardiac tamponade
	• Commotio cordis
	• Tracheobronchial disruption
	• Diaphragmatic rupture and injury
	• Traumatic asphyxia
	• Rib fracture
	• Flail segment
	• Sternal fracture
	• Vascular injuries
	• Impaled objects
	• Evisceration/shock

	107.03 Discuss monitoring of chest tubes.
	107.04 Demonstrate the following techniques of management for thoracic injuries: needle decompression, elective intubation, ECG monitoring. oxygenation, and ventilation
108.0	**Abdominal and Genitourinary Trauma:** Demonstrate a complex depth, comprehensive breadth of knowledge of pathophysiology, assessment, and management of abdominal and genitourinary trauma, patients of all ages. The student will be able to:
	108.01 Review the anatomy and physiology of organs and structures related to abdominal injuries.
	108.02 Describe the mechanism of injury for and types of open and closed abdominal and retroperitoneal injuries involving seat belts, penetrating, blunt and evisceration.

	108.03 Describe and demonstrate the pathophysiology, signs and symptoms and the assessment and management for, including but not limited to: • Pelvic fractures. • Solid organ injuries • Hollow organ injuries • Abdominal vascular injuries • Retroperitoneal space (kidneys) • Genitourinary system
	108.04 Review the psychological considerations associated with genitourinary injuries.
109.0	**Orthopedic Trauma:** Demonstrate a fundamental depth, foundational breadth of knowledge of pathophysiology, assessment, and management of orthopedic trauma patients of all ages. (Include psychosocial aspects of age- related assessment and treatment modifications for pediatric and geriatric patients). The student will be able to:
	109.01 Review the anatomy and physiology of the musculoskeletal system, include the healing process.
	109.02 Discuss pathophysiology, signs and symptoms, and MOI for orthopedic trauma.
	109.03 Define the different types of orthopedic trauma including fracture classifications. • Upper Vs Lower • Open / Closed Fractures • Pelvic • Dislocations • Sprains • Strains
	109.04 List the 6 “P” orthopedic injury assessment. • Pain • Paresthesia • Poikilothermia • Pallor • Paralysis • Pulselessness
	109.05 Discuss the following management techniques: • Heat therapy • Cold therapy • Splinting
	109.06 Describe and demonstrate the assessment and management of a patient with a suspected orthopedic trauma including medication administration (analgesics and anxiolytics).
	109.07 Discuss the need for assessment of distal pulses, motor, and sensation before and after splinting.

	109.08 Define luxation and subluxation.
	109.09 Explain the rationale for splinting at the scene versus load and go.
	109.10 Demonstrate the proper use various splinting materials and devices to include improvised and traction splints.
	109.11 Discuss and demonstrate the assessment and management of compartment and crush syndrome: • Destination decision • Rhabdomyolysis
	109.12 Discuss the pathophysiology and demonstrate the assessment and management of a tendon injury to the knee (patellar), shoulder and Achilles.
	109.13 Discuss the proper procedure to package an amputated body part for replantation
110.0	**Soft Tissue Trauma:** Demonstrate a complex depth, comprehensive breadth of knowledge of pathophysiology, assessment, and management of soft tissue trauma, patients of all ages. (Include psychosocial aspects of age- related assessment and treatment modifications for pediatric and geriatric patients). The student will be able to:
	110.01 Review anatomy and physiology and identify the major functions of the integumentary system.
	110.02 Discuss the pathophysiology of soft tissue injuries and the healing process including: • Inflammation • Epithelialization • Neovascularization • Collagen Synthesis • Alterations in would healing • Abnormal scar formation
	110.03 Describe and demonstrate the assessment and management of various soft tissue injuries. • Wounds (avulsion, bite, laceration, puncture, incision) • Crush/compartment syndrome • High-pressure injection injury
	110.04 Identify types of burn injuries including: • Thermal burn • Chemical burn • Electrical burn • Radiation burn
	110.05 Describe the depth classification of burn injuries including: • Superficial burn • Partial-thickness burn • Full-thickness burn • Other depth classification

	110.06 Describe and demonstrate methods for determining body surface area percentage of a burn injury including the “rule of nines”, the “rule of palms”, and other methods.
	110.07 Explain how the seriousness of a burn is related to its depth and percentage of body surface area (BSA) involved.
	110.08 Review the various management techniques for hemorrhage control.
	110.09 Differentiate among the types of injuries requiring the use of occlusive versus non-occlusive dressing.
	110.10 Demonstrate the assessment and management of specific burn injuries including: • Thermal • Inhalation • Chemical • Electrical • Radiation
	110.11 Describe the pathophysiologic complications and systemic complications of a burn injury.
	110.12 Discuss comorbidities in burn patients.
	110.13 Describe the management of a burn injury, including airway and ventilation, circulation, pharmacological, non-pharmacological, transport considerations, psychological support/ communication strategies, and other management.
	110.14 Describe the types of chemicals and their burning processes and a chemical burn injury to the eye.
	110.15 Discuss appropriate fluid resuscitation for burn patients.
111.0	**Head, Face, Neck, and Spine:** Demonstrate a fundamental depth, foundational breadth of knowledge of head, face, neck, and spine trauma, patients of all ages. The student will be able to:
	111.01 Discuss types of and potential complications of facial injuries to include life threating.
	111.02 Discuss Anatomy, assessment and management, and a field impression for injuries to the following areas: • Eye(s) • Nose • Throat/neck • Face • Mouth • Ear(s)
	111.03 Distinguish between an open and closed head injury.
	111.04 Define and explain the process involved with increasing ICP.
	111.05 Describe and demonstrate the assessment and general management of the head/ brain injury patient, including pharmacological and non-pharmacological treatment.

	111.06 Discuss the pathophysiology, signs and symptoms, and assessment and management for a patient for each of the following conditions: • Skull fracture • Cerebral contusion • Intracranial hemorrhage • Epidural, subdural, intracerebral, and subarachnoid • Perforated tympanic membranes • Orbital fracture • Mandibular fracture • Dental fracture • Facial / Unstable Facial fracture • Penetrating neck trauma • Spine trauma • Shaken baby syndrome. • Laryngotracheal injuries
	111.07 Review various methods for stabilization and removal of a helmet.
112.0	**Nervous System Trauma:** Demonstrate a fundamental depth, foundational breadth of knowledge of nervous system trauma, patients of all ages. The student will be able to:
	112.01 Review the anatomy and physiology of the central nervous system, brain, spinal cord, skull and spinal column.
	112.02 Discuss pathophysiology, signs and symptoms, assessment, and management of the following nervous system injury including: • Cauda Equine syndrome • Peripheral nerve injuries • Intracerebral hemorrhage • Cranial fractures • Brain tissue injuries • Spinal cord injuries • Brown-Sequard Syndrome • Anterior cord syndrome • Central cord syndrome • Spinal shock
	112.03 Discuss the mechanism of injury which would result in a nervous system injury.
	112.04 Review the rationale for and potential for motion restriction for the entire spine when a cervical spine injury is suspected
	112.05 Discuss the research involving the management of nervous system injuries and patient management.
113.0	**Special Considerations in Trauma:** Demonstrate a complex depth, comprehensive breadth of knowledge of special considerations in trauma, patients of all ages. The student will be able to:

	113.01 Integrate the assessment and management differences associated with the following special populations: • Pregnancy • Pediatric • Geriatric • Cognitively impaired patient
114.0	**Environmental Emergencies:** Demonstrate a complex depth, comprehensive breadth of knowledge of environmental emergencies, patients of all ages. The student will be able to:
	114.01 Discuss the pathophysiology, signs and symptoms, assessment and management and MOI of the following: • Drowning and water related incidents • Temperature-related illness • Bites and envenomation • Diving injuries • Lightning (electrical) injury • High altitude illness
	114.02 Identify environmental factors that may cause illness, exacerbate preexisting illness and complicate treatment or transport decisions.
	114.03 Review several methods of temperature monitoring.
	114.04 Describe the general process of thermal regulation, including substances used and wastes generated.
	114.05 Define fever and discuss its pathophysiologic mechanism.
	114.06 Discuss the role of fluid therapy in the treatment of temperature related emergencies.
	114.07 Review the gas laws related to the pathophysiology of injury in a submersion emergency.
	114.08 Describe the function of the Divers Alert Network (DAN) and how its members may aid in the management of diving-related illnesses.
	114.09 Differentiate among the various treatments and interventions for the management of diving accidents.
	114.10 Describe the specific function and benefit of hyperbaric oxygen therapy for the management of diving accidents.
115.0	Demonstrate a complex depth, comprehensive breadth of knowledge of multi-system trauma and blast injuries.
	115.01 Review of the priority of care in the multisystem trauma patient.
	115.02 Identify and Explain Blast Injuries
	115.03 Assessment of the pregnant patient.
	115.04 Differentiate between cephalic and abnormal delivery.

	115.05 Vaginal bleeding in the pregnant patient.
	115.06 Normal Delivery.
	115.07 Describe the management of a patient with pre-delivery emergencies.
	115.08 Discuss and demonstrate the patient care for all stages of labor in a cephalic delivery for the mother and the newborn.
	115.09 Describe the procedures for handling complications of delivery.
	115.10 Describe the management of the mother post-delivery.

	115.11 Demonstrate the procedures for handling complications of pregnancy including per-eclampsia and high risk.
	• Ectopic pregnancy
	• Abnormal delivery (nuchal cord, prolapsed cord, breech, shoulder dystocia, prematurity, multiparity)
	  ○ Third trimester and antepartum bleeding
	• (Placenta previa. placental abruption)
	  ○ Pathophysiology of complications of pregnancy
	  ○ Spontaneous abortion/miscarriage
	  ○ Complications of labor (fetal distress, premature rupture of membranes, rupture of uterus)
	  ○ Hyperemesis gravidarum

	115.12 Describe the management of the mother post-delivery.
	115.13 Discuss and demonstrate the patient care measures for all stages of labor in abnormal deliveries for the mother and the newborn.
	115.14 Describe special considerations when meconium is present in amniotic fluid or during delivery.
116.0	**Obstetrics:** Demonstrate a complex depth, comprehensive breadth of knowledge of the management of the obstetric patient within the scope of practice of the paramedic. The student will be able to:
	116.01 Review the anatomy and physiology of the reproductive system.
	116.02 Define the stages of labor and discuss how to assess them.
	116.03 Assessment of the pregnant patient.
	116.04 Differentiate between cephalic and abnormal delivery.
	116.05 Vaginal bleeding in the pregnant patient.
	116.06 Normal Delivery.
	116.07 Describe the management of a patient with pre-delivery emergencies.

	116.08 Discuss and demonstrate the patient care for all stages of labor in a cephalic delivery for the mother and the newborn.
	116.09 Describe the procedures for handling complications of delivery.
	116.10 Describe the management of the mother post-delivery.
	116.11 Demonstrate the procedures for handling complications of pregnancy including per-eclampsia and high risk. • Ectopic pregnancy • Abnormal delivery (nuchal cord, prolapsed cord, breech, shoulder dystocia, prematurity, multiparity) o Third trimester and antepartum bleeding • (Placenta previa. placental abruption) o Pathophysiology of complications of pregnancy o Spontaneous abortion/miscarriage o Complications of labor (fetal distress, premature rupture of membranes, rupture of uterus) o Hyperemesis gravidarum
	116.12 Describe the management of the mother post-delivery.
	116.13 Discuss and demonstrate the patient care measures for all stages of labor in abnormal deliveries for the mother and the newborn.
	116.14 Describe special considerations when meconium is present in amniotic fluid or during delivery.
117.0	**Neonatal Care:** Demonstrate a complex depth, comprehensive breadth of knowledge of the management of the neonatal patient within the scope of practice of the paramedic. The student will be able to:
	117.01 Review the term neonate.
	117.02 Identify antepartum and intrapartum factors that can affect the neonate.
	117.03 Discuss pulmonary perfusion and asphyxia.
	117.04 Calculate the Apgar score given various neonate situations.
	117.05 Review resuscitation equipment and procedures for the neonate.
	117.06 Newborn stabilization.
	117.07 Neonatal resuscitation.
	117.08 Anatomy and physiology of neonatal circulation.
	117.09 Determine when an orogastric tube should be inserted during positive-pressure ventilation.

	117.10 Discuss the pathophysiology, signs and symptoms, assessment and management of the following, including but not limited to: • Apnea • Bradycardia • Acidosis • Pneumothorax • Meconium-stained • Low blood volume • Dysphemistic hernia • Respiratory distress • Respiratory depression secondary to narcotics • Low birth weight • Seizures • Hypoglycemia • Diarrhea • Jaundice • Fever • Hypothermia • Birth injuries • Cardiac conditions
	117.11 Discuss post arrest management of the neonate.
	117.12 Discuss vascular access cannulation techniques for a newborn including umbilical vein/artery access.
118.0	**Pediatrics:** Demonstrate a complex depth, comprehensive breadth of knowledge of the management of the pediatric patient within the scope of practice of the paramedic. The student will be able to:
	118.01 Discuss key anatomical, physiological, and developmental characteristics of infants and children and their implications.
	118.02 Review and demonstrate techniques for successful assessment and treatment of infants and children.
	118.03 Review airway and ventilatory considerations and procedures for pediatric patients.
	118.04 Discuss the indications and methods for gastric decompression for infants and children.

118.05	Discuss the pathophysiology, signs and symptoms, assessment and management of the following, including but not limited to: • Altered level of consciousness • Trauma • Hypo-profusion • Respiratory distress/failure • cardiac dysrhythmia • Neurological emergency • Abuse/neglect • SUIDS • FABO • Respiratory emergencies • Congenital heart disease • Hydrocephalus/VP shunts • Birth Injuries • Cardiac Conditions
118.06	Discuss the appropriate procedure and equipment for vascular and intraosseous access.
118.07	Review basic cardiac life support (CPR) guidelines for infants and children.
118.08	Integrate advanced life support skills with basic cardiac life support for infants and children.
118.09	Discuss the indications, dosage, route of administration and special considerations for medication administration in infants and children.
118.10	Describe Sudden Unexplained Infant Death Syndrome (SUIDS), current theories, assessment and management, and the immediate needs of the family.
118.11	Discuss the parent/caregiver responses to the death of an infant or child.
118.12	Discuss and demonstrate the use of a length-based resuscitation tape and other methods for determining equipment sizes, drug doses, and other pertinent information for a pediatric patient.
118.13	Discuss proper placement of a gastric tube in infants and children.
118.14	Review appropriate routes and techniques for medication administration.
118.15	Demonstrate appropriate parent/caregiver interviewing techniques for infant and child death situations.
119.0	**Geriatrics:** Demonstrate a complex depth, comprehensive breadth of knowledge of the management of the geriatric patient within the scope of practice of the paramedic. The student will be able to:
119.01	Review and discuss the term geriatrics
119.02	Review the anatomy, physiology, and pathophysiology of the geriatric patient.

	119.03 Discuss common emotional and psychological concerns and conditions of the geriatric patient.
	119.04 Discuss the importance of fall prevention with the geriatric patient.
	119.05 Describe principles that should be employed when assessing and communicating with the geriatric patient.
	119.06 Describe the common causes, assessment and management of the geriatric patient with a medical, trauma, or psychosocial complaint.
	119.07 Discuss the impact of polypharmacy and medication non-compliance on patient assessment and management.
	119.08 Discuss medication issues of the elderly including polypharmacy, dosing errors and increased drug sensitivity and toxicology.
120.0	**Patients with Special Challenges:** Demonstrate a complex depth, comprehensive breadth of knowledge of management of the patient with special challenges within the scope of practice of the paramedic, patients of all ages. The student will be able to:
	120.01 Discuss the special considerations required when providing emergency care to patients with: • Abuse/neglect of vulnerable populations • Homelessness • Poverty • Bariatrics • Technology dependent (vagal nerve stimulators, CSF diversion devices or shunts, VAD, pacemakers, gastric tubes and others to be locally determined) • Hospice/terminally ill • Tracheostomy • Home care • Sensory deficit/loss • Developmental disability • Autism Spectrum Disorder • Orthotics/prosthetics
	120.02 Discuss special considerations regarding common medical devices used in the home care of patients with special challenges including: • Respiratory devices • Cardiac devices • Gastro-urinary devices • Central and peripheral IV catheters
	120.03 Describe home care and the types of patients it serves and the services it encompasses.
	120.04 Describe the characteristics associated with the profile of the typical abuser of: • Domestic abuser • Elder abuser • Child abuser

	120.05 Discuss the role of the Paramedic as a patient advocate for vulnerable populations.
	120.06 Differentiate between hospice/palliative care and curative care.
	120.07 Describe paraplegia/quadriplegia.
	120.08 Describe the various etiologies of mental illness.
	120.09 Recognize the presenting signs of the following: • Autism spectrum • Developmental disability • Down's syndrome
	120.10 Describe the following diseases/illnesses and identify each of their possible presenting signs, including but not limited to: • Arthritis • Cancer • Cerebral palsy • Cystic fibrosis • Multiple sclerosis • Muscular dystrophy • Myasthenia gravis • Poliomyelitis • Spina bifida, • Patients with a previous head injury • Mental illness
	120.11 Review hospice care, comfort care and DNR/DNAR as they relate to local practice, law and policy.
	120.12 Describe the access and discuss indwelling catheters, implanted central IV ports and central line monitoring.
	120.13 Describe complications of assessing each of the airway, vascular access, and GI/GU devices.
	120.14 Identify and describe the failure of wound drains.
	120.15 Review the rights of the terminally ill.
	120.16 Demonstrate proper tracheotomy care.
	120.17 Demonstrate the insertion of a new inner cannula and/or the use of an endotracheal tube to temporarily maintain an airway in a tracheostomy patient.
121.0	**Principles of Safely Operating a Ground Ambulance:** Demonstrate a simple depth, foundational breadth of knowledge of risks and responsibilities of transport. The student will be able to:
	121.01 Review the EMT standards and benchmarks for the Principles of Safely Operating a Ground Ambulance.

	121.02 Risks and responsibilities of emergency response and radio communications.
	121.03 Risks and responsibilities of operating emergency vehicles.
	121.04 Pediatric transport considerations.
	121.05 Risks and responsibilities of transport.
122.0	**Incident Management:** Demonstrate a complex depth, comprehensive breadth of knowledge of establishing and working within the incident management system. The student will be able to:
	122.01 Review the EMT standards and benchmarks for Incident Management and apply a complex depth and comprehensive breadth of establishing and working within the incident management system.
123.0	**Multiple Casualty Incidents:** Demonstrate a simple depth, foundational breadth of knowledge of responding to an emergency during a multiple casualty incident. The student will be able to:
	123.01 Review the EMT standards and benchmarks for Multiple Casualty Incidents.
	123.02 Establish and work within the incident management system.
	123.03 Understand the principles of Crew Resource Management.
124.0	**Air Medical:** Demonstrate a complex depth, comprehensive breadth of knowledge of air medical transport risks, needs and advantages. The student will be able to:
	124.01 Describe the advantages and disadvantages of air medical transport.
	124.02 Safe air medical operations.
	124.03 Identify appropriate reasons for the use of air medical for emergency patient transport.
	124.04 Describe the risks involved with the use of air medical transport.
	124.05 Criteria for utilizing air medical response.
	124.06 Demonstrate the actions needed to ensure effective and safe ground operations involving air medical response.
	124.07 Demonstrate appropriate communication of information needed for safe and effective interaction between the air medical crew and ground personnel.
	124.08 Medical risks/needs/advantages.
125.0	**Vehicle Extrication:** Demonstrate a simple depth, simple breadth of knowledge for safe vehicle extrication and use of simple hand tools. The student will be able to:
	125.01 Review the EMT standards and benchmarks for Vehicle Extrication.
	125.02 Safety principles of rescue operations.

126.0	**Hazardous Materials Awareness:** Demonstrate a simple depth, simple breadth of knowledge of risks and responsibilities of operating in a cold zone at a hazardous material or other special incident. The student will be able to:
	126.01 Review the EMT standards and benchmarks for Hazardous Materials Awareness.
	126.02 Risks and responsibilities of operating on the scene of a hazardous materials incident.
127.0	**Mass Casualty Incidents due to Terrorism and Disasters:** Demonstrate a simple depth, simple breadth of knowledge of risks and responsibilities of operating on the scene of a natural or man- made disaster. The student will be able to:
	127.01 Review the EMT standards and benchmarks for Mass Casualty Incidents.
	127.02 Risks and responsibilities of operating on the scene of a natural or man-made disaster.
	127.03 Operational goals.
	127.04 Field triage.
	127.05 Destination determination.
	127.06 Treatment principles.
Management Option: This option (outcomes 128-138) prepares students for administrative and supervisory positions in the Emergency Medical Services field.	
128.0	Demonstrate leadership and administrative skills basic to management emergency medical services systems. The student will be able to:
	128.01 Describe an emergency medical service system, its scope, national, state and local involvement, and the organizational climate that serves as the setting and framework for managing an emergency medical service system.
	128.02 Identify current trends and perspectives related to the management of health care organizations in general, and emergency medical service systems in particular, and the means by which the application of sound management principles and behavior can facilitate change.
	128.03 Interpret managerial principles, practices and processes and relate them to emergency medical service systems.
	128.04 Identify the role, responsibilities and parameters for the various levels of management within emergency medical service systems.
	128.05 State the control processes and techniques used to ensure that the objectives, strategies, and policies of the emergency medical service system are achieved effectively and efficiently.
	128.06 Relate the various aspects of organizational dynamics (decision making, motivations, leadership, and communication) to the needs and problems of emergency medical service systems.
	128.07 Relate personnel administration practices to the total scope of labor relations, including manpower acquisition, maintenance, and utilization.
129.0	Interpret federal, state and local laws as medical service systems. The student will be able to:
	129.01 List and discuss federal, state and local laws, administrative rules, requirements and recommendations relating to emergency medical service systems.

	129.02 List required standards and procedures for facility and staff.
	129.03 Identify mandatory requirements regarding environmental health and safety standards.
	129.04 Discuss the impact of legislative changes on emergency medical service systems.
130.0	Demonstrate knowledge of operational and organizational structures of emergency medical service system. The student will be able to:
	130.01 Describe the functions and standards of departments in emergency medical service systems.
	130.02 Contrast administrative roles and responsibilities in different types of emergency medical service systems.
	130.03 Describe principles and philosophies of emergency medical service systems.
	130.04 Identify several basic principles of emergency medical care.
	130.05 Describe communication techniques within health care systems.
	130.06 Utilize state of the art language and terminology when communicating within the emergency medical service system.
131.0	Demonstrate knowledge of psychological problems and stressors in emergency medical service employees and find appropriate solutions. The student will be able to:
	131.01 Demonstrate knowledge of the worth and dignity of each employee.
	131.02 Accommodate individual differences, characteristics, and behaviors.
	131.03 Adjust employee schedules, personnel assignments, etc. to provide optimum performance.
132.0	Demonstrate knowledge of materials and supplies used in emergency medical service systems. The student will be able to:
	132.01 Evaluate current inventory.
	132.02 Prepare purchase orders with knowledge of current financial status and budgetary constraints.
	132.03 Demonstrate knowledge of optimum quality, price, and quantity.
133.0	Demonstrate knowledge of occupational safety and health. The student will be able to:
	133.01 Prepare a plan for employee safety in the event of emergency situations involving business or office facilities.
	133.02 Identify hazardous materials and substances in the workplace.
	133.03 Identify appropriate storage facilities for all substances.
	133.04 Conduct in-service for employees.

	133.05 Respond to employee inquiries and post notices as needed.
	133.06 Implement appropriate Joint Commission patient safety goals.
134.0	Demonstrate knowledge of appropriate workloads for each employee. The student will be able to:
	134.01 Prepare job descriptions.
	134.02 Prepare job advertisements and notices.
	134.03 Compute man-hours required for each job position within the emergency medical service system.
	134.04 Identify factors that alter the workload and man-hours computed for each position.
135.0	Review, approve and monitor departmental capital and operational budgets. The student will be able to:
	135.01 Develop capital budget justification format.
	135.02 Delegate capital budget preparation to key managers.
	135.03 Analyze and approve appropriate capital budget items.
	135.04 Develop an operational budget format.
	135.05 Analyze and approve appropriate financial levels in each operational budget.
136.0	Identify and apply legal reimbursement systems. The student will be able to:
	136.01 Establish an item charge system that meets reimbursement system requirements.
	136.02 Establish a mechanism for utilization review and quality assurance.
	136.03 Develop an accounts receivable system which monitors and optimizes reimbursement.
137.0	Comply with accreditation standards of governmental or governmental-appointed agencies and organizations. The student will be able to:
	137.01 Describe and discuss procedures to meet required standards for emergency medical service systems.
	137.02 Identify the required standards for health care personnel in general and emergency medical service personnel in particular.
	137.03 Develop policies and operational procedures to meet required standards.
	137.04 Establish liaison mechanisms with appropriate accrediting organizations.
138.0	Demonstrate computer literacy. The student will be able to:

138.01 Describe and demonstrate the function and operation of basic computer systems.
138.02 Describe and demonstrate various types of computer systems and their specific applications.
138.03 Describe and demonstrate general applications such as word processing, database management, spreadsheets, and communications.
138.04 Describe and discuss special applications such as computer-aided dispatch (CAD), quality assurance, and inventory control.
Education Option: This option (outcomes 139-144) prepares students as trainers and/or instructors in the EMS field.
139.0 Demonstrate knowledge of basic teaching methods, learning and educational psychology. The student will be able to:
139.01 Describe and demonstrate various methods of student learning.
139.02 Describe and demonstrate various methods of teaching as they apply to student learning techniques.
139.03 Describe and demonstrate competency-based education (CBE).
139.04 Describe and demonstrate short-term and long-term memory and the implications of each on the student learning process.
139.05 Describe and demonstrate various educational psychologies.
140.0 Describe and discuss curriculum design and development. The student will be able to:
140.01 Develop and discuss needs assessments.
140.02 Develop a task analysis.
140.03 Develop student behavioral objectives.
140.04 Design and develop competency-based curriculum.
140.05 Integrate curriculum with current occupational responsibilities.
140.06 Perform on-going curriculum review and development.
141.0 Demonstrate appropriate measurement and evaluation skills. The student will be able to:
141.01 Construct appropriate objective tests commensurate with curriculum.
141.02 Develop effective measurement instruments for student performance in clinical settings.
141.03 Develop effective evaluation tools for evaluating student performance.
141.04 Record, monitor, and provide feedback to student regarding student progress.

142.0 Demonstrate mastery of required technical skills. The student will be able to:
142.01 Demonstrate performance of basic life support instructor skills.
142.02 Demonstrate performance of advanced life support instructor skills.
142.03 Demonstrate performance of trauma life support instructor skills.
142.04 Demonstrate performance of other medical skills appropriate to the emergency medical services curriculum.
143.0 Demonstrate classroom management skills. The student will be able to:
143.01 Dem onstrate and apply effective leadership skills.
143.02 Demonstrate and apply effective motivational skills.
143.03 Demonstrate and apply effective organizational skills.
143.04 Demonstrate and apply effective disciplinary skill.
144.0 Demonstrate computer literacy. The student will be able to:
144.01 Describe and discuss various types of computer systems and their specific applications as they relate to Emergency Medical Services.
144.02 Describe and discuss applications such as word processing, database management, spreadsheets, communications, and computer-aided instruction (CAI) as they relate to Emergency Medical Services.

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as experimental, quality, and safety procedures are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate, and troubleshoot equipment/tools used to make observations. Students understand measurement error; and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

Special Notes

Through the use of common core courses and the addition of several optional courses, this program is designed to prepare students for employment in the following occupational areas:

Education Option: Field Training Officer, In-service Training Officer, or EMS Instructor, Vocational Education Teachers, Postsecondary or to provide supplemental training for persons previously or currently employed in these occupations. The program must be approved by the Department of Health, Office of Emergency Medical Services (EMS); and the curriculum must adhere to the US Department of Transportation (DOT) National EMS Educational Standards for both the EMT and Paramedic.

Management Option: EMS Coordinator, EMS Supervisor, EMS Shift Supervisor, Operations Manager, EMS Manager, or Director of EMS Services (General and Operations Managers).

General Education Course Requirements for AS and AAS Degrees

State Board of Education Rule 6A-14.030(4), F.A.C., identifies 15 credit hours as the minimum amount of general education coursework required in the Associate of Science (AS) degree and the Associate of Applied Science (AAS) degree. In addition, Rule 6A-14.0303, F.A.C., implements s. 1007.25, F.S., and requires students entering a technical education degree program in the 2022-2023 academic year, and thereafter, to complete at least one identified core course in each subject area as part of the general education course requirements (15 credit hours total) before a degree is awarded) The core subject areas include:

- Communication.
- Humanities.
- Mathematics.
- Natural Sciences.
- Social Sciences.

Career and Technical Student Organization (CTSO)

CTSOs are co-curricular career and technical student organizations providing leadership training and reinforcing specific career and technical skills. Career and Technical Student Organizations provide activities for students as an integral part of the instruction offered. Other CTSOs not listed in this curriculum framework or recognized by the Florida Department of Education are permissible provided they support student mastery over the standards and benchmarks of this curriculum framework.

Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

Certificate Programs

A College Credit Certificate consists of a program of instruction of less than sixty (60) credits of college-level courses, which is part of an AS or AAS degree program and prepares students for entry into employment (Rule 6A-14.030, F.A.C.). This AS degree program includes the following College Credit Certificates:

Paramedic (0351090405) – 42 credit hours
Emergency Medical Technician (0351090415) – 12 credit hours

Standards for the above certificate programs are contained in separate curriculum frameworks.

Florida Department of Education
Curriculum Framework

The standards and benchmarks for this program were updated for the 2026-27 academic year.

Program Title: **Nuclear Medicine Technology**
Career Cluster: **Health Science**

Associate in Science	
CIP Number	1351090502
Program Type	College Credit
Program Length	75 credit hours
CTSO	HOSA
SOC Codes (all applicable)	For program SOC codes, please see the Program and Course Tables section of the CTE Program Resources page linked below.
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml

Purpose

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Health Science career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of Health Science career cluster.

This program is designed to prepare students for employment as radiologic technologists or nuclear medicine technologists or to provide supplemental training for persons previously or currently employed in this occupation.

The content includes but is not limited to the utilization of radioactive materials for diagnostic and therapeutic procedures, patient care, administrative functions, health and safety including CPR.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Program Structure

This program is a planned sequence of instruction consisting of 75 credit hours.

When developing the course sequence for the local implementation of this program, select courses that:

- Meet the skill development requirements of the standards and benchmarks of this program.
- Meet the general education core course requirements of Rule 6A-14.0303, Florida Administrative Code.
- Where reasonable and practicable, align with programs offered by your institution or other postsecondary institutions in Florida, including:
    - Related CCC and ATD credentials.
    - Baccalaureate degrees within the same career pathway and/or Federal CIP code.

Visit FloridaShines' Discover Programs website to identify other institutions that offer similar programs to review their course sequencing. Where appropriate, course alignment between institutions offering related programs can facilitate interagency student articulation.

Visit FloridaShines' Common Prerequisites Manual to identify courses that are prerequisites for admission into an upper division program. When sub-baccalaureate courses are aligned to the course admissions requirements of baccalaureate programs with the same career pathway, students can enter upper division coursework seamlessly.

Regulated Programs

The program must also be approved by the Department of Health Bureau of Radiation Control.

Florida's Career Readiness Skills for CTE Programs

Employability Skills	
01.0	Apply academic skills to workplace scenarios.
01.01	Use reading skills.
01.02	Use writing skills.
01.03	Use mathematical strategies and procedures.
01.04	Use scientific principles and procedures.
02.0	Design a solution to an industry problem.
02.01	Use critical thinking.
02.02	Use creativity.
02.03	Make sound decisions.
02.04	Solve problems.
02.05	Reason.
02.06	Plan and organize.
03.0	Manage resources within an industry project
03.01	Manage time.
03.02	Manage money or resources.
03.03	Manage materials.
03.04	Manage personnel.
04.0	Oversee the subcomponents, operations and output of a technical or organizational system.
04.01	Manage systems.
04.02	Monitor systems.
04.03	Improve systems.
05.0	Use information for decision making.
05.01	Locate information.
05.02	Organize information.
05.03	Use information.

	05.04 Analyze information.
	05.05 Communicate information.
06.0	Apply relevant technology to workplace scenarios to aid productivity.
	06.01 Use technology.
07.0	Interpret and express interpersonal communication.
	07.01 Communicate verbally.
	07.02 Listen actively.
	07.03 Comprehend written material.
	07.04 Convey information in writing.
	07.05 Communicate nonverbally.
	07.06 Interpret nonverbal communication.
08.0	Interact with others to accomplish workplace goals.
	08.01 Collaborate with others in a team.
	08.02 Respond to customer needs.
	08.03 Exercise leadership.
	08.04 Negotiate to resolve conflict.
	08.05 Respect others.
09.0	Manage personal behavior to maximize productivity and professional growth.
	09.01 Demonstrate responsibility and self-discipline.
	09.02 Adapt and show flexibility.
	09.03 Work independently.
	09.04 Demonstrate a willingness to learn.
	09.05 Demonstrate integrity.
	09.06 Demonstrate professionalism.
	09.07 Take initiative.
	09.08 Display positive attitude.
	09.09 Take responsibility for professional growth.

Job Attainment	
10.0	Find, assess and apply to job opportunities.
10.01	Identify online job posts relevant to his or her career aspirations.
10.02	Compare and contrast the job posts' required qualifications, job duties, compensation, benefits and employers.
10.03	Define what information, documentation and writing prompts are required for the positions.
11.0	Communicate personal competence, character and fit for a job opportunity.
11.01	Develop a resume.
11.02	Write a cover letter.
11.03	Curate a professional portfolio that includes work products.
11.04	Prepare for and experience a mock job interview.
12.0	Cultivate and leverage relationships to professionally advance.
12.01	Request a signed reference letter, letter of recommendation and/or an online skill/professionalism endorsement.
12.02	Develop a plan to cultivate a professional digital footprint.
12.03	Develop a networking plan for a specific industry of interest.

Standards

After successfully completing this program, the student will be able to perform the following:

01.0 Demonstrate knowledge of the health care delivery system and health occupations.
02.0 Demonstrate the ability to communicate and use interpersonal skills effectively.
03.0 Demonstrate legal and ethical responsibilities.
04.0 Demonstrate an understanding of and apply wellness and disease concepts.
05.0 Recognize and practice safety and security procedures.
06.0 Recognize and respond to emergency situations.
07.0 Recognize and practice infection control procedures.
08.0 Demonstrate an understanding of information technology applications in healthcare.
09.0 Demonstrate employability skills.
10.0 Demonstrate knowledge of blood borne diseases, including HIV/AIDS.
11.0 Apply basic math and science skills.
12.0 Practice radiation safety.
13.0 Practice basic radio-pharmacy.
14.0 Calculate doses and administer radiopharmaceuticals and interventional pharmaceuticals.
15.0 Perform "in vitro"/"in vivo" non-imaging procedures.
16.0 Perform imaging procedures and radiotherapy.
17.0 Practice quality control.

Florida Department of Education
Student Performance Standards

Program Title: **Nuclear Medicine Technology**
CIP Number: **1351090502**
Program Length: **75 credit hours**

Standards 1-11 are referred to as the **Health Science Core** and are required standards in this program. Secondary and Postsecondary students completing the health science core will not have to repeat the core in any other health science program in which it is a part. When the recommended sequence is followed, the structure allows students to complete at specified points for employment or remain for advanced training or cross-training.

To ensure consistency whenever these courses are offered, the health science core standards (1-11) and benchmarks have been placed in a separate document. To access this document, visit this link:
https://www.fldoe.org/core/fileparse.php/20569/urlt/health-sci-core-psav-cc-2324.rtf

At the completion of this program, the student will be able to:
12.0 Practice radiation safety. The student will be able to:
12.01 Maintain compliance with local, state and federal regulations.
12.02 Follow appropriate protection procedures for patients, coworkers, and public.
12.03 Follow approved procedures for identifying and labeling radioactive material and radiopharmaceutical doses.
12.04 Perform area surveys and wipe tests.
12.05 Dispose of radioactive wastes appropriately and in accordance with local, state, and federal regulations.
12.06 Apply and interpret proper personnel monitoring of radiation exposure.
12.07 Perform decontamination procedures.
12.08 Implement appropriate accrediting/regulatory agency guidelines.
13.0 Practice basic radio-pharmacy. The student will be able to:
13.01 Maintain radiopharmaceutical laboratory records and materials.
13.02 Perform or simulate generator eluate.
13.03 Perform quality control testing on generator eluate.

	13.04 Prepare radiopharmaceuticals including quality control tests.
	13.05 Demonstrate understanding of ordering radiopharmaceuticals in appropriate dosage and effective time frame.
14.0	Calculate doses and administer radiopharmaceutical and interventional pharmaceuticals. The student will be able to:
	14.01 Perform dose calibrator quality control tests.
	14.02 Calculate the activity and volume of dose.
	14.03 Assay diagnostic and therapeutic radiopharmaceuticals.
	14.04 Properly administer dose using appropriate route.
	14.05 Calculate, prepare, and administer diagnostic and therapeutic radiopharmaceuticals and interventional pharmaceuticals.
	14.06 Perform venipuncture accurately and efficiently.
	14.07 Participate in the tagging of blood cells.
	14.08 Maintain records of administrations/preparations.
	14.09 Recognize and follow precautions and contraindications of medications including radiopharmaceuticals.
	14.10 Evaluate patient history.
	14.11 Evaluate patient status/needs and care for them accordingly, including treatment for adverse effects.
	14.12 Document and maintain records according to facility protocol.
15.0	Perform "in vitro"/"in vivo" non-imaging procedures. The student will be able to:
	15.01 Operate laboratory equipment.
	15.02 Accurately and efficiently collect specimens in accordance with facility protocol.
	15.03 Operate radiation detection equipment.
	15.04 Perform radioassays and calculations.
16.0	Perform imaging procedures and radiotherapy. The student will be able to:
	16.01 Verify order, history, and protocol for patient prior to proceeding.
	16.02 Verify identity of patient in accordance with facility protocol.

	16.03 Explain procedure and prepare patient for procedure.
	16.04 Select proper acquisition parameters to obtain planar, SPECT, SPECT/CT, WB, and PET/CT images.
	16.05 Appropriately perform planar, WB, SPECT, SPECT/CT, and PET/CT data processing using reconstruction techniques.
	16.06 Properly prepare images to be sent to physician according to facility protocol.
	16.07 Perform PACS procedures according to facility protocol.
	16.08 Maintain appropriate records.
17.0	Practice quality control. The student will be able to:
	17.01 Perform scheduled quality control testing of laboratory and imaging equipment.
	17.02 Operate scintillation detectors.
	17.03 Operate and perform daily quality control on gas-filled detectors.
	17.04 Maintain a quality assurance program according to accrediting and regulatory agencies.

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as, experimental, quality, and safety procedures are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate and troubleshoot equipment/tools used to make observations. Students understand measurement error; and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

Special Notes

The graduate is eligible to be licensed in Florida as a Certified Radiologic Technologist - Nuclear Medicine (i.e., a Nuclear Medicine Technologist). As specified in Chapter 468, Part IV, F.S. and 64E, F.A.C. All accredited NMT programs which are recognized and accepted by either the American Registry of Radiologic Technologists (ARRT), or the Nuclear Medicine Technology Certification Board (NMTCB), are approved by the Department of Health.

Students who complete the program will be eligible to apply to the Department of Health for the required state Nuclear Medicine Technologist license. For further information contact:

Department of Health, MQA Radiologic Technology Program
4052 Bald Cypress Way, Bin #C85, Tallahassee, FL 32399
Phone: (850) 245-4910 Fax: (850) 921-6365
www.doh.state.fl.us/mqa/rad-tech

Students who complete the program will be eligible to make an application to take one or both of the National Registry examination. For further information contact:

American Registry of Radiologic Technologists (ARRT)
1255 Northland Drive, St. Paul, MN 55120-1155
(612) 687-0048 www.arrt.org

Or

Nuclear Medicine Technology Certification Board (NMTCB)
3558 Habersham at Northlake, Building I, Tucker, GA 30084
Toll Free: (800) 659-3953 www.nmtcb.org

This program meets the Department of Health's education requirements for HIV/AIDS, Domestic Violence and Prevention of Medical Errors. Although not a requirement for initial licensure, it is a requirement for renewal, therefore the instructor **may** provide a certificate for renewal purposes to the student verifying these requirements have been met.

If students in this program are seeking a licensure, certificate, or registration through the Department of Health, please refer to 456.0635, F.S. for more information on disqualification for a license, certificate, or registration through the Department of Health.

The program must be accredited by the:

Joint Review Committee on Educational Programs in Nuclear Medicine Technology
820 W. Danforth Rd., #B1, Edmond OK 73003
Tel: (405) 285-0546/ Fax: (405) 285-0579 http://www.jrcnmt.org/

Or

Southern Association of Colleges and Schools (SACS)
9115 Westside Parkway, Alpharetta, GA 30009
888-41ED NOW (888-413-3669) http://www.sacs.org/

The nuclear medicine technologist performs patient care with understanding of patients' special needs, fears and concerns and recognizes changes in patient condition. Limiting the exposure of the patient and other health care workers to minimal levels of radiation is of paramount importance.

A fundamental knowledge and understanding of the physical and biological sciences, including radiation biology and protection, as well as radiopharmaceuticals "in vivo" and "in vitro", is essential: nuclear physics, biochemistry, immunology, physiology and an introduction to computer application/operation with data manipulation must be included.

Students are encouraged to become members of their appropriate professional organizations such as the Society of Nuclear Medicine – Technologist Section (SNM-TS), Florida Nuclear Medicine Technologists, Inc. (FNMT), the American Society of Radiologic Technologists (ASRT), Florida Society of Radiologic Technologists (FSRT) and its local affiliate.

The Core should be taken first in the program. Following the successful completion of the core, the National Health Care Foundation Skill Standards Assessment with instructor approval and the completion of a portfolio.

General Education Course Requirements for AS and AAS Degrees

State Board of Education Rule 6A-14.030(4), F.A.C., identifies 15 credit hours as the minimum amount of general education coursework required in the Associate of Science (AS) degree and the Associate of Applied Science (AAS) degree. In addition, Rule 6A-14.0303, F.A.C., implements s. 1007.25, F.S., and requires students entering a technical education degree program in the 2022-2023 academic year, and thereafter, to complete at least one identified core course in each subject area as part of the general education course requirements (15 credit hours total) before a degree is awarded) The core subject areas include:

- Communication.
- Humanities.
- Mathematics.
- Natural Sciences.
- Social Sciences.

Career and Technical Student Organization (CTSO)

CTSOs are co-curricular career and technical student organizations providing leadership training and reinforcing specific career and technical skills. Career and Technical Student Organizations provide activities for students as an integral part of the instruction offered. Other CTSOs not listed in this curriculum framework or recognized by the Florida Department of Education are permissible provided they support student mastery over the standards and benchmarks of this curriculum framework.

Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

Florida Department of Education
Curriculum Framework

The standards and benchmarks for this program were updated for the 2026-27 academic year.

Program Title: **Radiation Therapy**
Career Cluster: **Health Science**

Associate in Science	
CIP Number	1351090701
Program Type	College Credit
Program Length	77 credit hours
CTSO	HOSA
SOC Codes (all applicable)	For program SOC codes, please see the Program and Course Tables section of the CTE Program Resources page linked below.
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml

Purpose

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Health Science career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of Health Science career cluster.

The purpose of this program is to prepare students for employment as Radiation Therapy Technologist (Radiation Therapists) or to provide supplemental training for persons previously or presently employed in these occupations.

The content includes but is not limited to performing radiation therapy procedures with skill and understanding to practice the art and science of radiation therapy technology; to administer the prescribed radiation therapy treatments of the highest caliber, thereby providing the patient treatments of the highest quality and accuracy; to become members of the health care team that contributes to the physical and psychological comfort of the patient, to provide radiation protection to the patient, self and health care team; to work with the health care team to improve radiotherapeutic health care in the hospital and community; and to understand the importance of maintaining membership in the professional organizations and keeping abreast of the changes in the field of radiation therapy.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Program Structure

This program is a planned sequence of instruction consisting of 77 credit hours.

When developing the course sequence for the local implementation of this program, select courses that:

- Meet the skill development requirements of the standards and benchmarks of this program.
- Meet the general education core course requirements of Rule 6A-14.0303, Florida Administrative Code.
- Where reasonable and practicable, align with programs offered by your institution or other postsecondary institutions in Florida, including:
  - Related CCC and ATD credentials.
  - Baccalaureate degrees within the same career pathway and/or Federal CIP code.

Visit FloridaShines' Discover Programs website to identify other institutions that offer similar programs to review their course sequencing. Where appropriate, course alignment between institutions offering related programs can facilitate interagency student articulation.

Visit FloridaShines' Common Prerequisites Manual to identify courses that are prerequisites for admission into an upper division program. When sub-baccalaureate courses are aligned to the course admissions requirements of baccalaureate programs with the same career pathway, students can enter upper division coursework seamlessly.

Regulated Programs

This program is regulated by the Florida Department of Health, Bureau of Radiation Control.

The program must be accredited by the Joint Review Committee on Education in Radiologic Technology (JRCERT), 20 North Wacker Drive, Suite 900, Chicago, Illinois 60606-2901, (312) 704-5300, or by the Southern Association of Colleges and Schools to enable graduates to become candidates for examination in Radiation Therapy Technology by the American Registry of Radiologic Technologists. It may also be approved by the Department of Health, Bureau of Radiation Control so that the graduate is eligible for licensure in Florida as a certified Radiation Therapy Technologists. As specified in Chapter 468 Part IV, F.S. and Chapter 64E-3, F.A.C.

Students completing the program will be eligible to make application to take the National Registry examination. For further information contact:

American Registry of Radiologic Technologists (ARRT)
1255 Northland Drive, St. Paul, MN 55120-1155
(612-687-0048) www.arrt.org

Florida's Career Readiness Skills for CTE Programs

Employability Skills	
01.0	Apply academic skills to workplace scenarios.
01.01	Use reading skills.
01.02	Use writing skills.
01.03	Use mathematical strategies and procedures.
01.04	Use scientific principles and procedures.
02.0	Design a solution to an industry problem.
02.01	Use critical thinking.
02.02	Use creativity.
02.03	Make sound decisions.
02.04	Solve problems.
02.05	Reason.
02.06	Plan and organize.
03.0	Manage resources within an industry project
03.01	Manage time.
03.02	Manage money or resources.
03.03	Manage materials.
03.04	Manage personnel.
04.0	Oversee the subcomponents, operations and output of a technical or organizational system.
04.01	Manage systems.
04.02	Monitor systems.
04.03	Improve systems.
05.0	Use information for decision making.
05.01	Locate information.
05.02	Organize information.
05.03	Use information.

	05.04 Analyze information.
	05.05 Communicate information.
06.0	Apply relevant technology to workplace scenarios to aid productivity.
	06.01 Use technology.
07.0	Interpret and express interpersonal communication.
	07.01 Communicate verbally.
	07.02 Listen actively.
	07.03 Comprehend written material.
	07.04 Convey information in writing.
	07.05 Communicate nonverbally.
	07.06 Interpret nonverbal communication.
08.0	Interact with others to accomplish workplace goals.
	08.01 Collaborate with others in a team.
	08.02 Respond to customer needs.
	08.03 Exercise leadership.
	08.04 Negotiate to resolve conflict.
	08.05 Respect others.
09.0	Manage personal behavior to maximize productivity and professional growth.
	09.01 Demonstrate responsibility and self-discipline.
	09.02 Adapt and show flexibility.
	09.03 Work independently.
	09.04 Demonstrate a willingness to learn.
	09.05 Demonstrate integrity.
	09.06 Demonstrate professionalism.
	09.07 Take initiative.
	09.08 Display positive attitude.
	09.09 Take responsibility for professional growth.

Job Attainment	
10.0	Find, assess and apply to job opportunities.
10.01	Identify online job posts relevant to his or her career aspirations.
10.02	Compare and contrast the job posts' required qualifications, job duties, compensation, benefits and employers.
10.03	Define what information, documentation and writing prompts are required for the positions.
11.0	Communicate personal competence, character and fit for a job opportunity.
11.01	Develop a resume.
11.02	Write a cover letter.
11.03	Curate a professional portfolio that includes work products.
11.04	Prepare for and experience a mock job interview.
12.0	Cultivate and leverage relationships to professionally advance.
12.01	Request a signed reference letter, letter of recommendation and/or an online skill/professionalism endorsement.
12.02	Develop a plan to cultivate a professional digital footprint.
12.03	Develop a networking plan for a specific industry of interest.

Standards

After successfully completing this program, the student will be able to perform the following:

01.0 Demonstrate the proficiency in the skills and knowledge required of clinical practice.
02.0 Convey an understanding of the ethics that impact radiation therapy at both the state and federal levels.
03.0 Demonstrate proficiency in imaging and processing in radiation oncology.
04.0 Demonstrate a basic understanding of laws related to radiation therapy at both the state and federal levels.
05.0 Demonstrate knowledge of the principles and practices that encompass the training, practice, and professional standards of radiation therapy as a specialized area within healthcare.
06.0 Demonstrate knowledge of essential concepts related to pathophysiology.
07.0 Demonstrate knowledge of the fundamental principles of radiation therapy.
08.0 Demonstrate knowledge of the principles of radiation therapy as it relates to the management of neoplastic disease.
09.0 Demonstrate the skills, procedures and knowledge required for effective quality management, quality assurance, safety and operations.
10.0 Demonstrate an understanding of the integral aspects of radiation biology required of a radiation therapist.
11.0 Demonstrate proficient knowledge of physics pertinent to the understanding of the different types of ionizing radiation used in the clinical settings.
12.0 Demonstrate an advanced understanding of the concepts and theories of radiation therapy physics .
13.0 Demonstrate the principles of radiation protection and safety for the radiation therapist.
14.0 Demonstrate knowledge of magnetic resonance Imaging, screening, safety and imaging considerations in radiation therapy.
15.0 Demonstrate knowledge of the foundational concepts and competencies in assessment and evaluation of the patient.
16.0 Demonstrate proficiency in research methods, evidence-based practice and information literacy.
17.0 Demonstrate the skills, techniques and knowledge required for medical imaging methods to capture sectional anatomy.
18.0 Demonstrate the skills, techniques and knowledge required for the clinical planning of patient treatment.

Florida Department of Education
Student Performance Standards

Program Title: **Radiation Therapy**
CIP Number: **1351090701**
Program Length: **77 credit hours**

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At the completion of this program, the student will be able to:	
01.0	Demonstrate the proficiency in the skills and knowledge required of clinical practice. The student will be able to:
01.01	Operate within the radiation therapy scope of practice.
01.02	Demonstrate values and attitudes congruent with the profession's standards and ethics.
01.03	Formulate priorities in daily clinical practice.
01.04	Apply concepts of teamwork.
01.05	Adapt to dynamic clinical situations.
01.06	Establish patient-centered, clinically effective service delivery strategies.
01.07	Deliver a prescribed course of treatment adhering to acceptable departmental, institutional, governmental and professional standards.
01.08	Assess the patient's status and condition to deliver a prescribed course of radiation therapy.
01.09	Use critical thinking for accurate treatment delivery by demonstrating knowledge of didactic concepts.
01.10	Demonstrate the principles of radiation protection.
01.11	Monitor tumor lethal dose and normal tissue tolerance dose.
01.12	Evaluate the patient's clinical response to treatment parameters as prescribed to determine if medical intervention by the doctor is necessary.
01.13	Apply the principles of total quality management.
01.14	Detect equipment malfunctions and take appropriate action.
01.15	Construct and prepare immobilization, beam alignment and beam modification devices.

	01.16	Design, evaluate and implement treatment plans.
	01.17	Validate manual and computer dosimetric calculations.
	01.18	Perform simulation, localization and therapeutic procedures as they pertain to radiation therapy in accordance with national patient safety standards.
	01.19	Demonstrate appropriate and effective communication.
	01.20	Demonstrate safe, ethical and legal practices.
	01.21	Evaluate the significance of the patient's unique diagnosed cancerous pathology to formulate appropriate simulations and treatment actions.
	01.22	Apply appropriate safety, transfer and immobilization principles.
	01.23	Apply concepts of teaching and learning theories in design, implementation and evaluation in the education of patient, family, colleagues and the community.
	01.24	Describe departmental resources that are designed to meet the health and wellness of patient needs.
	01.25	Demonstrate appropriate interaction with patients and patients' family and friends.
	01.26	Assess patient side effects and complications to create an interdisciplinary management strategy that fosters prevention, healing and comfort.
	01.27	Document all aspects of patient care and management in the appropriate record.
	01.28	Document and communicate errors and discrepancies in accordance with institutional and national quality management procedures.
	01.29	Demonstrate knowledge of situations where life support procedures would be necessary.
	01.30	Document knowledge of the institution's procedures in response to emergencies, disasters and accidents.
	01.31	Apply strategies that ensure professional development at a level of clinical practice consistent with acceptable standards.
	01.32	Demonstrate quality assurance procedures for all treatment delivery equipment and accessories.
	01.33	Evaluate outcomes to continuously improve radiation therapy services.
	01.34	Incorporate Health Insurance Portability and Accountability Act (HIPAA) requirements into clinical practice.
	01.35	Interpret treatment planning prior to and during a course of treatment.
02.0	Convey an understanding of the ethics that impact radiation therapy at both the state and federal levels. The student will be able to:	
	02.01	Identify theories and principles that guide ethical decision making for practice situations.

	02.02 Describe practice situations that carry high potential for dilemmas that require ethical scrutiny.
	02.03 Discuss basic ethical duties of health care providers.
	02.04 Demonstrate an awareness of and sensitivity to various cultural and ethnic differences among various client groups.
	02.05 Discuss the concept of patient advocacy in support of patients' rights.
	02.06 Discuss ethical theories and models.
	02.07 Discuss the radiation therapy scope of practice, code of ethics and practice standards.
	02.08 Examine concepts of personal honesty, integrity, accountability and professional compassion as ethical imperatives in professional practice.
	02.09 Differentiate between distributive, compensatory and retributive justice.
	02.10 Differentiate between provider and patient relationships.
	02.11 Discuss the duty of the radiation therapist to take responsibility for actions and decisions.
	02.12 Discuss the elements of an informed consent.
	02.13 Discuss standards of disclosure.
	02.14 Analyze issues related to the use and flow of patient information to determine confidentiality.
	02.15 Explain ethical issues related to different age groups.
	02.16 Identify current ethical issues in health care.
	02.17 Demonstrate application of a system of examination, clarification, determination, the doctrine of informed consent and other issues related to patient rights.
	02.18 Explain ethical issues related to the profession.
	02.19 Discuss the relationship between ethics and health care policy.
	02.20 Examine ethical issues arising daily in a radiation therapy department.
03.0	Demonstrate proficiency in imaging and processing in radiation oncology. The student will be able to:
	03.01 Define terminology associated with digital imaging systems.
	03.02 Describe the various types of digital receptors.

03.03	Discuss the fundamentals of digital imaging.
03.04	Discuss image acquisition on the simulator and linear accelerator.
03.05	Describe the evaluative criteria for imaging detectors on the simulator and linear accelerator.
03.06	Describe the histogram and the process or histogram analysis as it relates to automatic rescaling and determining an exposure indicator.
03.07	Identify the exposure indices for digital imaging receptors on the simulator and linear accelerator.
03.08	Discuss the response of digital imaging systems to background and scatter radiation on the simulator and linear accelerator.
03.09	Identify appropriate measures to control scatter in the simulator and linear accelerator rooms.
03.10	Explain methods to avoid histogram analysis errors.
03.11	Describe image processing employed for digital images.
03.12	Associate the impact of image processing parameters to the image appearance.
03.13	Associate the effects of inappropriate processing on image clarity or conspicuity.
03.14	Describe and apply the fundamental physical principles of exposure for digital detectors.
03.15	Describe the selection of technical factors to ensure appropriate receptor exposure levels for digital detectors.
03.16	Describe the conditions that cause quantum mottle in a digital image.
03.17	Explain methods to avoid poor quality images in simulation and treatment planning.
03.18	Examine the potential impact of digital imaging systems on patient exposure and methods of practicing the as low as reasonably achievable (ALARA) concept with digital systems.
03.19	Describe picture archiving and communications system (PACS) and its function.
03.20	Identify components of a PACS system.
03.21	Describe patient benefits gained through the use of telemedicine.
03.22	Identify modality types that may be incorporated into a PACS.
03.23	Define digital imaging and communications in medicine (DICOM).
03.24	Describe data flow for a DICOM image from an imaging modality to a PACS.

03.25	Describe HIPAA concerns with electronic information.
03.26	Identify common problems associated with retrieving/viewing images.
03.27	Analyze relationships of factors affecting image contrast, density and resolution to determine optimal image quality.
03.28	Apply techniques to enhance image details and reduce image distortion.
03.29	Determine artifact types, cause and preventive measures.
03.30	Explain the basic principles of image formation for each of the following modalities: magnetic resonance (MR), ultrasound imaging and nuclear medicine.
03.31	Describe and explain functions of the components of the computed tomography (CT) imaging system.
03.32	Differentiate between conventional and spiral/helical CT scanning.
03.33	List the CT computer data processing steps.
03.34	Name the functions of the array processor used for image reconstruction.
03.35	Explain the difference between reconstructing and reformatting an image.
03.36	Describe the application of the following terms to CT: • Pixel. • Matrix. • Voxel. • Linear attenuation coefficient. • CT/Hounsfield number. • Partial volume averaging. • Window width (ww) and window level (wl). • Spatial resolution. • Contrast resolution. • Noise. • Annotation. • Region of interest (ROI). • Standard vs. volumetric data acquisition.
03.37	Identify the types and appearance of artifacts most commonly affecting CT images.
03.38	Explain how artifacts can be reduced or eliminated.
03.39	Describe current data storage techniques used in CT.

	03.40 Name the radiation protection devices that can be used to reduce patient dose in CT and describe the correct application of each.
04.0	Demonstrate a basic understanding of laws related to radiation therapy at both the state and federal levels. The student will be able to:
	04.01 Apply concepts related to social, political, economic and historical issues to analyze the different sources of law.
	04.02 List the steps in a civil legal procedure and identify the potential role of a radiation therapist.
	04.03 Assess the role of effective communication skills in reducing legal action.
	04.04 Analyze negligence related to clinical practice issues of simulation, treatment delivery, patient assessment, patient education and quality assurance to determine if negligence is present.
	04.05 Examine the role of the radiation therapist in the informed consent process, patient rights and practice standards.
	04.06 Analyze safety programs to reduce patient injury.
	04.07 Examine the importance of documentation and maintenance of clinical practice records.
	04.08 Formulate a risk management program.
	04.09 Analyze the role of code of ethics, radiation therapy scope of practice and radiation therapy practice standards as guides to assess the appropriateness of professional actions.
	04.10 Discuss the practice of lifelong learning in maintaining professional competence.
05.0	Demonstrate knowledge of the principles and practices that encompass the training, practice, and professional standards of radiation therapy as a specialized area within healthcare. The student will be able to:
	05.01 Discuss the policies and procedures of the educational program.
	05.02 Discuss the policies and procedures of clinical education settings.
	05.03 Identify the responsibilities of a radiation therapy student.
	05.04 Use library/Internet resources pertinent to radiation oncology.
	05.05 Discuss maintaining patient and student confidentiality.
	05.06 Analyze the importance of multidisciplinary care of cancer patients.
	05.07 Discuss the philosophy and mission of health care delivery systems and educational programs.
	05.08 Incorporate key terms used in the principles and practice of radiation therapy.
	05.09 Identify the contents/sections of the patient's records.

	05.10 Explain radiation safety procedures for radiation therapy.
	05.11 Explain health safety procedures for personnel and patients.
	05.12 Differentiate between accreditation, credentialing, certification, registration, licensure, and regulations.
	05.13 Explain the purposes, functions and activities of international, national, state and local professional organizations.
	05.14 Discuss the importance of professional and community commitment.
	05.15 Discuss the radiation therapist scope of practice, practice standards and professional code of ethics.
	05.16 Discuss the benefits of continuing education as related to improving the quality of patient care, professional development and personal enhancement.
	05.17 Discuss career advancement and opportunities for radiation therapist.
06.0	Demonstrate knowledge of essential concepts related to pathophysiology. The student will be able to:
	06.01 Describe the physiological response in inflammation and cell injury due to pathological insult.
	06.02 Assess the predictive factors, including genetics, lifestyles, age and environment as they influence the development of cancer and associated diseases.
	06.03 Compare the body’s response to hereditary, lifestyle, age and environmental factors.
	06.04 Given a specific oncologic-related disease, determine probable diagnostic, prognostic, staging, grading and the rationale for the appropriate therapeutic pathway.
	06.05 Given the histology of a neoplasm, determine the tumor characteristics.
	06.06 Given a common disease, anticipate the effects of the disease on the oncologic patient.
07.0	Demonstrate knowledge of the fundamental principles of radiation therapy. The student will be able to:
	07.01 Given diagnostic information about a particular cancer, determine the appropriateness of using radiation therapy as a primary treatment modality.
	07.02 Determine the medical and patient information necessary to develop a radiation therapy treatment plan.
	07.03 Determine the appropriate treatment energy for any given tumor type or location.
	07.04 Differentiate between beam modifiers and their uses with a variety of treatment energies.
	07.05 Determine the appropriate treatment setup aid, immobilization technique and beam modifier for a given treatment technique.
	07.06 Identify inconsistencies between treatment prescription and treatment plan.

	07.07 Develop a CT simulation plan for a particular tumor to include steps needed prior to, during and after the procedure.
	07.08 Critique treatment images in relation to simulation images.
	07.09 Discuss the radiation therapist scope of practice and practice standards.
08.0	Demonstrate knowledge of the principles of radiation therapy as it relates to the management of neoplastic disease. The student will be able to:
	08.01 Distinguishes tumor histology to determine pathways associated with cancer and neoplastic disease.
	08.02 Examine the role of surgical, radiation and medical oncology to include immunotherapy (biological therapy) and personalized medicine in the management of neoplastic disease.
	08.03 Discuss multidisciplinary emerging approaches to neoplastic disease management.
	08.04 Discuss the role of radiation therapy in the management of all patient populations with benign and malignant diseases.
	08.05 Discuss epidemiologic and etiologic information pertinent to each neoplastic site.
	08.06 Discuss the clinical presentation for each anatomic neoplastic site.
	08.07 Discuss preventive methods/screening tools associated with each neoplastic site.
	08.08 Explain detection, diagnosis, grading and staging systems for each neoplastic site.
	08.09 Implement the principles and practice of simulation to prepare a patient for treatment.
	08.10 Apply the parameters of treatment field design and arrangement used to treat neoplastic diseases.
	08.11 Examine the role of radiation therapy in palliative disease management.
	08.12 Identify the treatment regimens and fractionalization schemes used in palliative disease management.
	08.13 Describe the role of radiation therapy in the management of oncology emergencies.
09.0	Demonstrate the skills, procedures and knowledge required for effective quality management, quality assurance, safety and operations. The student will be able to:
	09.01 Discuss the components of a quality management (QM) program in developing a culture of safety in radiation oncology.
	09.02 Discuss the purpose, function and member’s role on a quality management team.
	09.03 Explain federal, state and institutional accreditation standards and reporting regulations for quality management.
	09.04 Examine outcomes of quality management in radiation oncology.

09.05	Explain the purpose, procedures and frequency for manual and electronic treatment documentation.
09.06	Identify errors in treatment documentation.
09.07	Describe the procedure for assuring accuracy of manual and electronic records.
09.08	Examine the purpose and function of record and verify systems.
09.09	Examine the patient chart in terms of medical and legal issues.
09.10	Discuss the significance of treatment outcomes for patient care, education and research in radiation oncology.
09.11	Discuss the quality indicators to evaluate patient care areas.
09.12	Explain the purpose, procedure and frequency for all QA and QM procedures in a radiation therapy department.
09.13	Evaluate how the outcomes of QA and QM procedures impact patient care, education and research.
09.14	Examine statistical reporting available through quality assurance computerization.
09.15	Perform quality measures for computerized operation, data collection and reporting.
09.16	Determine sources of malfunction on the treatment and simulation/localization units.
09.17	Distinguish between safe and hazardous equipment operation.
09.18	Comply with acceptable quality limits for treatment operation.
09.19	Identify the source of error and determine the effect on treatment delivery, education and research.
09.20	Differentiate between quality management programs.
09.21	Discuss the importance of patient education in the quality management process.
09.22	Discuss the importance of proper patient identification and treatment field documentation.
09.23	Discuss aspects of clinical evaluation, therapeutic decision-making and informed.
09.24	Identify the key aspects of delivering a precise prescribed treatment dose.
09.25	Discuss quality control procedures and recommended tolerances for simulation equipment, megavoltage treatment units and treatment planning systems.
09.26	Discuss quality control procedures and recommended tolerances for the safe handling of brachytherapy sources and remote after loading equipment.

	09.27 Defend the rational for near miss and error report.
	09.28 Critique the safety in radiation oncology.
	09.29 Identify CQI opportunities.
	09.30 Explain the differences between CQI and QA.
	09.31 Select appropriate CQI tools for specific situations.
	09.32 Apply CQI principles to specific situations.
	09.33 Discuss human resources' role in the work environment.
	09.34 Discuss the need for organizational and departmental accreditation.
	09.35 Recognize accreditation effects on radiation therapy operations.
	09.36 Use appropriate current procedural terminology (CPT) codes for professional and technical charges.
	09.37 Summarize the various types of insurance and the mechanisms necessary for approval of care.
	09.38 Discuss reimbursement for radiation therapy services.
	09.39 Compare the components and methods of developing and managing a departmental budget.
10.0	Demonstrate an understanding of the integral aspects of radiation biology required of a radiation therapist. The student will be able to:
	10.01 Integrate laws and principles of radiation biology to the clinical practice of radiation therapy.
	10.02 Identify radiosensitive components of the cell.
	10.03 Distinguish between units of radiation quantities and radiobiologic measures using SI units.
	10.04 Differentiate between direct and indirect effects of ionizing radiation.
	10.05 Explain factors affecting relative biological effectiveness (RBE).
	10.06 Discuss the effects of electromagnetic and particulate radiations on cellular interactions.
	10.07 Evaluate factors influencing radiobiologic/biophysical events at the cellular and subcellular level.
	10.08 Determine biologic damage due to radiation-induced chemical reactions.
	10.09 Discuss radiation effects on the cell cycle.

	10.10 Compare somatic and genetic effects of radiation.
	10.11 Describe factors influencing radiation response of cells and tissues.
	10.12 Discuss the laws of Bergonié and Tribondeau.
	10.13 Interpret cell survival curves to determine radiosensitivity under numerous conditions.
	10.14 Discuss the relationship of radiation quality and dose to systemic responses.
	10.15 Describe radiation syndromes and factors influencing response.
	10.16 Differentiate between linear, nonlinear, and threshold and nonthreshold dose response curves.
	10.17 Describe the 4 Rs of radiobiology.
	10.18 Compare the relationship of time, dose, fractionation, volume, distance and site to radiation effects.
	10.19 Discuss the use of radiation response modifiers.
	10.20 Describe the influence of chemotherapy and hyperthermia alone and in combination with radiation therapy.
11.0	Demonstrate proficient knowledge of physics pertinent to the understanding of the different types of ionizing radiation used in the clinical setting. The student will be able to:
	11.01 Define the fundamental units of the English, metric and Système International d'Unites (SI) systems.
	11.02 Calculate various unit conversions.
	11.03 Demonstrate applications of the general principles that relate to inertia, work, energy and momentum.
	11.04 Describe Bohr's theory of atomic structure.
	11.05 Compare the characteristics and functions of a proton, neutron and electron.
	11.06 Discuss the energy levels of the atom.
	11.07 Define the terms relating to atomic nomenclature.
	11.08 Compare covalent bonding and ionic bonding.
	11.09 Describe the process of ionization.
	11.10 Differentiate between the characteristics of a mixture, substance and element.
	11.11 Classify the characteristics of an element using the periodic table.

11.12 Compare the characteristics of a molecule and compound.
11.13 Describe the nature of light.
11.14 Explain the relationship between wavelength, frequency and velocity.
11.15 Differentiate between the radiations of the electromagnetic (EM) spectrum.
11.16 Explain the relationship of energy and frequency to Planck's constant.
11.17 Distinguish between electrical charge and electrical field.
11.18 Describe the methods of electrification.
11.19 Explain the laws of electrostatics and their application.
11.20 Describe the properties and laws of magnetism.
11.21 Explain the electronic spin of an element to its potential magnetic properties.
11.22 Describe the principle of magnetic induction.
11.23 Define potential difference, current, resistance, circuit and electric power.
11.24 Compare the characteristics of direct and alternating currents.
11.25 Compare electrical measuring devices.
11.26 Discuss electrical protective devices.
11.27 Discuss the interaction between electric and magnetic fields.
11.28 Describe the characteristics and functions of a cathode and rotating anode.
11.29 Describe the construction and function of tube housing.
11.30 Identify the parts of an x-ray tube.
11.31 Determine heat units and cooling characteristics of x-ray tube housings.
11.32 Propose methods to extend tube life.
11.33 Discuss application and components of automatic exposure devices.
11.34 State the principles of x-ray production.

11.35	Compare the production of bremsstrahlung with the production of characteristic radiations.
11.36	Compare various photon interactions in terms of description of interaction, relation to atomic number and applications.
11.37	Discuss relationships of wavelength and frequency to beam characteristics.
11.38	Define units of radiation measurement and provide an example of its application.
12.0	Demonstrate an advanced understanding of the concepts and theories of radiation therapy physics. The student will be able to:
12.01	Distinguish between somatic and genetic effects of radiation exposure.
12.02	Differentiate between stochastic and nonstochastic effects of radiation exposure.
12.03	Defend the concept of as low as reasonably achievable (ALARA).
12.04	Discuss the concept of negligible individual risk.
12.05	Describe the legal and ethical radiation protection responsibilities of radiation workers.
12.06	Use appropriate SI terminology and units when discussing radiation protection issues.
12.07	Select the correct SI units of radiation for exposure, absorbed dose, dose equivalence and radioactivity.
12.08	Discuss the interrelationship between relative biological effectiveness and quality factors.
12.09	Explain the theory, operation, applications and limitations of radiation detection devices.
12.10	State the authority, boundaries and regulations of the state and national regulatory agencies.
12.11	Discuss the requirements and responsibilities of the radiation safety officer.
12.12	Compare the various methods used for personnel monitoring.
12.13	State the exposure limits for occupational and nonoccupational individuals.
12.14	Explain techniques used to reduce unnecessary dose to the patient.
12.15	Develop an emergency action plan for equipment failure.
12.16	Discuss the principles of radiation protection room design factors.
12.17	Describe the elements of a radiation protection survey for an inpatient undergoing brachytherapy.
12.18	Calculate exposure doses based on time, distance and type of radioactivity.

12.19	Describe the procedure for the wipe test.
12.20	Describe procedures to receive and ship radioactive materials.
12.21	Evaluate a record keeping system for radioactive sources to ensure inclusion of all required elements.
12.22	Compare the characteristics of an isotope beam and an x-ray beam.
12.23	Explain linear energy transfer (LET).
12.24	Compare photon interactions with matter and classify radiations produced by direct and indirect ionization.
12.25	Explain major influencing factors of photon beam attenuation.
12.26	Describe the parameters of narrow beam geometry used in the measurement of attenuation.
12.27	Plot heteroenergetic and monoenergetic beam attenuation data.
12.28	Calculate half-value layer (HVL).
12.29	Calculate the homogeneity coefficient.
12.30	Calculate attenuation requirements for beam modification devices.
12.31	Discuss activation of clinical accessories and alternate shielding materials due to photodisentigration.
12.32	Explain charged particle interactions with matter, describing dose deposition, energy loss and shielding requirements.
12.33	Define mass stopping power.
12.34	Describe a Bragg curve.
12.35	Discuss the purpose and importance of the National Institute of Standards and Technology (NIST).
12.36	Discuss the purpose and importance of the Accredited Dosimetry Calibration Labs (ADCL).
12.37	Demonstrate use of the appropriate type of radiation detector for given clinical applications.
12.38	Calculate correction factors for chamber calibration, temperature, pressure and other factors used to correct a chamber reading.
12.39	Discuss protocols used for external beam calibration.
12.40	Analyze spot check data to make appropriate judgment decisions regarding machine treatment parameters. Describe the quality of a gamma-ray (ã) beam in terms of HVL, ã energy or mean ã energy/nuclide of origin.
12.41	Describe beam filtration for the various external beam modalities, including but not limited to purpose, types of filters and their

	construction, energy considerations, inherent vs. added filtration and effect on HVL.
12.42	Calculate the approximate mean energy of a megavoltage beam.
12.43	Compare absorbed dose vs. exposure.
12.44	Discuss the relationship between kinetic energy released in the medium (KERMA), exposure and absorbed dose.
12.45	Calculate air dose to absorbed dose conversions in tissue, including but not limited to, energy considerations, applicable conversion factors, necessary instrumentation and methods.
12.46	Discuss the clinical importance of phantom material and size when applying the Bragg-Gray Cavity Theory.
12.47	Critique how dose distribution measured in a phantom is used to predict dose distribution in a patient.
12.48	Compare the characteristics and composition of various phantoms.
12.49	Compare source-skin distance (SSD) and isocentric methods of calibration.
13.0	Demonstrate the principles of radiation protection and safety for the radiation therapist. The student will be able to:
13.01	Distinguish between somatic and genetic effects of radiation exposure.
13.02	Differentiate between stochastic and nonstochastic effects of radiation exposure.
13.03	Defend the concept of as low as reasonably achievable (ALARA).
13.04	Discuss the concept of negligible individual risk.
13.05	Describe the legal and ethical radiation protection responsibilities of radiation workers.
13.06	Use appropriate SI terminology and units when discussing radiation protection issues.
13.07	Select the correct SI units of radiation for exposure, absorbed dose, dose equivalence and radioactivity.
13.08	Discuss the interrelationship between relative biological effectiveness and quality factors.
13.09	Explain the theory, operation, applications and limitations of radiation detection devices.
13.10	State the authority, boundaries and regulations of the state and national regulatory agencies.
13.11	Discuss the requirements and responsibilities of the radiation safety officer.
13.12	Compare the various methods used for personnel monitoring.
13.13	State the exposure limits for occupational and nonoccupational individuals.

	13.14 Explain techniques used to reduce unnecessary dose to the patient.
	13.15 Develop an emergency action plan for equipment failure.
	13.16 Discuss the principles of radiation protection room design factors.
	13.17 Describe the elements of a radiation protection survey for an inpatient undergoing brachytherapy.
	13.18 Calculate exposure doses based on time, distance and type of radioactivity.
	13.19 Describe the procedure for the wipe test.
	13.20 Describe procedures to receive and ship radioactive materials.
	13.21 Evaluate a record keeping system for radioactive sources to ensure inclusion of all required elements.
14.0	Demonstrate knowledge of magnetic resonance Imaging, screening, safety and imaging considerations in radiation therapy. The student will be able to:
	14.01 Identify the potential hazards associated with the strong magnetic field and radiofrequency radiation in MRI.
	14.02 Describe the MRI safety screening process.
	14.03 Identify safety protocols, and procedures to ensure patient and personnel safety.
	14.04 Identify contraindications for MRI patients to prevent potential harm
	14.05 Identify the types of magnetic fields and the risks associated with each type.
	14.06 Identify the MRI safety zones.
	14.07 Explain how MRI images are generated.
	14.08 Describe artifacts caused by patient motion or metallic implants.
	14.09 Demonstrate knowledge of different sequence parameters.
	14.10 Demonstrate knowledge of the T1 and T2 relaxation times and their effect on image contrast
15.0	Demonstrate knowledge of foundational concepts and competencies in assessment and evaluation of the patient. The student will be able to:
	15.01 Differentiate between the roles and responsibilities of health care team members treating cancer patients.
	15.02 Demonstrate applications of professional self-care.

15.03 Examine different psychological aspects of dying.
15.04 Explain the dynamics of communicating with the cancer patient and family.
15.05 Recognize radiation side effects and complications and select the appropriate medical intervention.
15.06 Identify factors that influence a patient's emotional responses.
15.07 Formulate content for answers to questions frequently asked by patients.
15.08 Assess the physical condition of the patient before, during and after treatment delivery.
15.09 Demonstrate application of the principles of health safety.
15.10 Discuss the principles of medication administration.
15.11 Recognize common medications and explain their actions and side effects.
15.12 Evaluate a patient for an adverse reaction to medication.
15.13 Describe emergency response procedures.
15.14 Describe the proper care of patients with tubes.
15.15 Provide patient education for medical procedures.
15.16 Assess the patient before, during and after brachytherapy procedures.
15.17 Demonstrate the application of the principles of radiation protection during brachytherapy procedures.
15.18 Assess the nutritional status of the cancer patient to provide nutritional education or intervention.
15.19 Demonstrate proper use of the principles of patient safety and transfer.
15.20 Provide appropriate patient education following patient assessment.
15.21 Select patient education materials appropriate for patient needs.
15.22 Compare conventional and integrative medicine.
15.23 Identify primary language sources from which medical terms are derived.
15.24 Define medical terms according to basic elements.
15.25 Interpret language, abbreviations and symbols in the medical record.

16.0	Demonstrate proficiency in research methods, evidence-based practice and information literacy The student will be able to:
16.01	Analyze research articles to determine the accuracy and validity of findings.
16.02	Integrate information literacy concepts into a research project.
16.03	Critique research projects to determine appropriateness and usefulness to the profession.
17.0	Demonstrate the skills, techniques and knowledge required for clinical planning of patient treatment. The student will be able to:
17.01	Relate the importance of imaging with computed tomography, magnetic resonance and PET-CT in radiation therapy.
17.02	Differentiate between sagittal, coronal and axial planes of the body.
17.03	Review the principles of imaging for imaging modalities using relevant terminology.
17.04	Compare the imaging modalities for application to radiation therapy.
17.05	Identify normal anatomical structures on sectional images.
17.06	Identify topographic anatomy used to locate underlying internal structures.
17.07	Describe image formation and orientation for computed tomography, magnetic resonance, positron emission tomography, ultrasonography, and image fusion.
18.0	Demonstrate the skills, techniques and knowledge required for the clinical planning of patient treatment. The student will be able to:
18.01	Compare photon isodose curves for clinically relevant photon beams.
18.02	Describe the general influencing factors that distinguish various isodose curves.
18.03	Determine internal and external patient factors that influence a beam’s distribution and apply isodose correction methods.
18.04	Describe methods of determining a patient’s external contour, definition of internal structures and volumes of interest used in treatment planning.
18.05	Identify organs and tissues at risk and their dose limitations using published tolerance dose tables.
18.06	Describe how biologic effective dose is influenced by prescription and treatment variables.
18.07	Compare fractionation schemes.
18.08	Discuss the integral dose concept.
18.09	Use appropriate factors for treatment calculations.

18.10 Describe the interrelationships of the various factors used in treatment calculations.
18.11 Perform dose calculations for external photon and electron beam treatments for all clinical variations.
18.12 Calculate the absorbed dose to off-axis points of interest.
18.13 Compare absorbed doses within a treatment volume with beam variations.
18.14 Explain algorithms incorporated into treatment planning computers.
18.15 Describe the clinical applications for moving beam techniques.
18.16 Describe the past pointing technique.
18.17 Calculate equivalent squares using various methods and consider the limitations of each.
18.18 Describe the effect of asymmetric beam collimation on dose distribution.
18.19 Describe methods for determining dose distribution at points outside the treatment field.
18.20 Calculate dose under a block.
18.21 Evaluate a variety of treatment plans for clinical use.
18.22 Identify all possible techniques that may be employed to clinically match adjacent fields.
18.23 Describe the multiple junction shift methods.
18.24 Examine hot and cold regions that occur with the various matching methods, and describe the methods used to eliminate them.
18.25 Describe procedures for permanent record and legal documentation of matching fields.
18.26 Analyze dose distributions to determine the need for beam modifiers.
18.27 Compare various methods of tissue compensation and the dosimetric impact.
18.28 Examine the fabrication of 2-D and 3-D compensators.
18.29 Construct manual and computerized isodose curves.
18.30 Differentiate between isodose distributions for all clinical variations.
18.31 Evaluate possible corrections for treatment errors to correct misadministration of prescribed dose.
18.32 Differentiate between the treatment planning terms: maximum, minimum, mean, modal and median dose.

18.33	Describe International Commission on Radiological Units (ICRU) recommendations on dose variance within a target volume and the effect that variances may have on cure rates, local control and tolerance.
18.34	Analyze dose volume histograms relative to treatment planning.
18.35	Evaluate patient changes to determine the integrity of a treatment plan.
18.36	Compare electron beam depth dose characteristics for various energies.
18.37	Identify clinical factors that would influence beam type and energy selection.
18.38	Differentiate between standard treatment distance and virtual distance.
18.39	Discuss why equivalent squares used with photon beams are inappropriate with electron beams.
18.40	Describe how inhomogeneities influence electron beam path.
18.41	Discuss the considerations of matching an electron field to other adjacent photon or electron fields.
18.42	Analyze which shielding materials and thickness would be needed to attenuate electron beams to appropriate levels.
18.43	Describe how electron shielding materials should be arranged for external vs. internal shielding.
18.44	Discuss changes in dose rate and dose distribution with changes in blocking and electron energy.
18.45	Compare calculations of shielding thicknesses to measured data for electron beams.
18.46	Determine why specific isodose lines are prescribed for various clinical situations involving critical and noncritical structures.
18.47	Calculate percentage depth dose for 10%, 50%, 80% and 90% lines for various electron energies.
18.48	Describe the considerations in the clinical application of special electron treatments, including total skin irradiation and arc therapy.
18.49	Compare the general isodose pattern of particle beams.
18.50	Determine clinical usefulness of various beam types and the clinical implications involved.
18.51	Describe the various imaging modalities in tumor localization and planning.
18.52	Discuss planning techniques used to accommodate the treatment volume shape.
18.53	Discuss isocenter localization for radiosurgery.
18.54	Identify vital structures considered during treatment planning.
18.55	Compare single dose delivery to fractionated dose delivery schedules.

18.56	Discuss the need for specific equipment used to deliver radiation for conformal therapy.
18.57	Discuss the purpose and contents of the ICRU Report 62 and supplements.
18.58	Discuss the computer system features necessary for conformal therapy treatment planning.
18.59	Identify common sites amenable to conformal therapy and the typical doses employed for those sites.
18.60	Compare configurations of multileaf collimation systems.
18.61	Discuss considerations for multileaf collimators.
18.62	Review the differences between static and dynamic multileaf collimation systems.
18.63	Identify appropriate clinical applications for brachytherapy.
18.64	Compare and contrast brachytherapy delivery systems.
18.65	Describe the techniques and applicators used for intracavitary, interstitial and endovascular brachytherapy procedures.
18.66	Explain how simulation and CT data is used for source localization.
18.67	Discuss the objective of treatment planning for brachytherapy procedures.
18.68	Summarize dose specification and prescription techniques for different types of implants.
18.69	Describe optimization techniques used in computer aided dose calculations.
18.70	Discuss record keeping requirements for radioactive material.
18.71	State radiation safety requirements for brachytherapy procedures.
18.72	Identify appropriate clinical applications for using intensity modulated radiation therapy (IMRT).
18.73	Describe the general flow of the IMRT process from patient immobilization through treatment delivery.

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as, experimental, quality, and safety procedures are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate and troubleshoot equipment/tools used to make observations. Students understand measurement error; and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

Clinical education has been established for the students in these programs. It is designed to permit accurate assessment of the knowledge, skills and abilities of students in the clinical education component of the program. After completion of the prerequisite practice of radiotherapeutic procedures, students indicate readiness for evaluation in a specific category to the clinical affiliate or faculty in the assigned clinical education center.

Clinical education and laboratory activities facilitate student rotations to provide them equitable opportunity to achieve the program clinical objective utilizing multiple affiliates. The resulting clinical rotation and laboratory practicum provides students with patient treatment techniques utilizing a variety of megavoltage equipment, radiation therapy patient care procedures, localization and treatment, radiation therapy physics including dosimetry, machine calibration, quality assurance, handling of sealed radioactive sources and protection, follow up, patient care and patient recordkeeping.

Special Notes

The program is designed to provide the radiation therapy community with workers who, under the supervision of a Radiation Oncologist, uses ionizing radiation to treat disease. The curriculum provides students an opportunity to develop technical and social skills through experiences in the clinic, classroom, and laboratory.

This program meets the Department of Health's education requirements for HIV/AIDS, Domestic Violence and Prevention of Medical Errors. Although not a requirement for initial licensure, it is a requirement for renewal, therefore the instructor **may** provide a certificate for renewal purposes to the student verifying these requirements have been met.

If students in this program are seeking a licensure, certificate, or registration through the Department of Health, please refer to 456.0635, F.S. for more information on disqualification for a license, certificate, or registration through the Department of Health.

Students are encouraged to become members of their appropriate professional organizations such as the American Society of Radiologic Technologists (ASRT), Florida Society of Radiologic Technologists (FSRT) and its' local affiliate.

General Education Course Requirements for AS and AAS Degrees

State Board of Education Rule 6A-14.030(4), F.A.C., identifies 15 credit hours as the minimum amount of general education coursework required in the Associate of Science (AS) degree and the Associate of Applied Science (AAS) degree. In addition, Rule 6A-14.0303, F.A.C., implements s. 1007.25, F.S., and requires students entering a technical education degree program in the 2022-2023 academic year, and thereafter, to complete at least one identified core course in each subject area as part of the general education course requirements (15 credit hours total) before a degree is awarded) The core subject areas include:

- Communication.
- Humanities.
- Mathematics.
- Natural Sciences.
- Social Sciences.

Career and Technical Student Organization (CTSO)

CTSOs are co-curricular career and technical student organizations providing leadership training and reinforcing specific career and technical skills. Career and Technical Student Organizations provide activities for students as an integral part of the instruction offered. Other CTSOs not listed in this curriculum framework or recognized by the Florida Department of Education are permissible provided they support student mastery over the standards and benchmarks of this curriculum framework.

Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

Florida Department of Education
Curriculum Framework

The standards and benchmarks for this program were updated for the 2026-27 academic year.

Program Title: **Respiratory Care**
Career Cluster: **Health Science**

Associate in Science	
CIP Number	1351090800
Program Type	College Credit
Program Length	76 credit hours
CTSO	HOSA
SOC Codes (all applicable)	For program SOC codes, please see the Program and Course Tables section of the CTE Program Resources page linked below.
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml

Purpose

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Health Science career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of Health Science career cluster.

This program trains students for the occupation of Respiratory Therapist or to provide supplemental training for persons previously or currently employed in these occupations. The respiratory therapist specializes in the application of scientific knowledge and theory to practical, clinical problems of respiratory care.

The content includes but is not limited to quality control of all units, intermittent positive pressure breathing (IPPB); humidity/aerosol therapy; medical gas administration; broncho-pulmonary drainage; mechanical ventilation; airway management; emergency care; pulmonary function testing; cardiopulmonary rehabilitation; measurement and reporting of cardiopulmonary sampling, infection control; cardiopulmonary drug administration, physiologic monitoring, and special advanced procedures.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Program Structure

This program is a planned sequence of instruction consisting of 76 credit hours.
When developing the course sequence for the local implementation of this program, select courses that:

- Meet the skill development requirements of the standards and benchmarks of this program.
- Meet the general education core course requirements of Rule 6A-14.0303, Florida Administrative Code.
- Where reasonable and practicable, align with programs offered by your institution or other postsecondary institutions in Florida, including:
    - Related CCC and ATD credentials.
    - Baccalaureate degrees within the same career pathway and/or Federal CIP code.

Visit FloridaShines' Discover Programs website to identify other institutions that offer similar programs to review their course sequencing. Where appropriate, course alignment between institutions offering related programs can facilitate interagency student articulation.

Visit FloridaShines' Common Prerequisites Manual to identify courses that are prerequisites for admission into an upper division program. When sub-baccalaureate courses are aligned to the course admissions requirements of baccalaureate programs with the same career pathway, students can enter upper division coursework seamlessly.

Regulated Programs

Graduates of this program are eligible to take the NBRC (National Board for Respiratory Care) examination(s) and become **licensed with the State of Florida Department of Health, Division of Quality Assurance.**

Florida's Career Readiness Skills for CTE Programs

Employability Skills	
01.0	Apply academic skills to workplace scenarios.
01.01	Use reading skills.
01.02	Use writing skills.
01.03	Use mathematical strategies and procedures.
01.04	Use scientific principles and procedures.
02.0	Design a solution to an industry problem.
02.01	Use critical thinking.
02.02	Use creativity.
02.03	Make sound decisions.
02.04	Solve problems.
02.05	Reason.
02.06	Plan and organize.
03.0	Manage resources within an industry project
03.01	Manage time.
03.02	Manage money or resources.
03.03	Manage materials.
03.04	Manage personnel.
04.0	Oversee the subcomponents, operations and output of a technical or organizational system.
04.01	Manage systems.
04.02	Monitor systems.
04.03	Improve systems.
05.0	Use information for decision making.
05.01	Locate information.
05.02	Organize information.
05.03	Use information.

	05.04 Analyze information.
	05.05 Communicate information.
06.0	Apply relevant technology to workplace scenarios to aid productivity.
	06.01 Use technology.
07.0	Interpret and express interpersonal communication.
	07.01 Communicate verbally.
	07.02 Listen actively.
	07.03 Comprehend written material.
	07.04 Convey information in writing.
	07.05 Communicate nonverbally.
	07.06 Interpret nonverbal communication.
08.0	Interact with others to accomplish workplace goals.
	08.01 Collaborate with others in a team.
	08.02 Respond to customer needs.
	08.03 Exercise leadership.
	08.04 Negotiate to resolve conflict.
	08.05 Respect others.
09.0	Manage personal behavior to maximize productivity and professional growth.
	09.01 Demonstrate responsibility and self-discipline.
	09.02 Adapt and show flexibility.
	09.03 Work independently.
	09.04 Demonstrate a willingness to learn.
	09.05 Demonstrate integrity.
	09.06 Demonstrate professionalism.
	09.07 Take initiative.
	09.08 Display positive attitude.
	09.09 Take responsibility for professional growth.

Job Attainment	
10.0	Find, assess and apply to job opportunities.
10.01	Identify online job posts relevant to his or her career aspirations.
10.02	Compare and contrast the job posts' required qualifications, job duties, compensation, benefits and employers.
10.03	Define what information, documentation and writing prompts are required for the positions.
11.0	Communicate personal competence, character and fit for a job opportunity.
11.01	Develop a resume.
11.02	Write a cover letter.
11.03	Curate a professional portfolio that includes work products.
11.04	Prepare for and experience a mock job interview.
12.0	Cultivate and leverage relationships to professionally advance.
12.01	Request a signed reference letter, letter of recommendation and/or an online skill/professionalism endorsement.
12.02	Develop a plan to cultivate a professional digital footprint.
12.03	Develop a networking plan for a specific industry of interest.

Standards

After successfully completing this program, the student will be able to perform the following:

01.0 Recognize and practice safety and security procedures.
02.0 Recognize and practice infection control procedures.
03.0 Select, review, obtain, and interpret data.
04.0 Select, assemble, and check equipment for proper function, operation, and cleanliness.
05.0 Initiate, conduct, and modify prescribed therapeutic procedures.
06.0 Demonstrate knowledge of the health care delivery system, and maintain records and communications.
07.0 Demonstrate legal and ethical responsibilities.
08.0 Demonstrate knowledge of employment requirements as a respiratory care professional.
09.0 Perform advanced respiratory care procedures.
10.0 Administer cardiopulmonary drugs.
11.0 Assist the physician with special respiratory therapy procedures.
12.0 Initiate and conduct patient and family education.

Florida Department of Education
Student Performance Standards

Program Title: **Respiratory Care**
CIP Number: **1351090800**
Program Length: **76 credit hours**

At the completion of this program, the student will be able to:	
01.0	Recognize and practice safety and security procedures. The student will be able to:
01.01	Recognize safe and unsafe working conditions and report safety hazards.
01.02	Identify and describe methods for medical error reduction and prevention in the various healthcare settings.
01.03	Demonstrate personal safety procedures based on Occupational Safety and Health Administration (OSHA) and Centers for Disease Control (CDC) regulations, including standard precautions.
01.04	Recognize Safety Data Sheets (SDS) and comply with safety signs, symbols, and labels.
01.05	Demonstrate proper body mechanics and ergonomics.
01.06	Demonstrate the procedure for properly identifying patients.
01.07	Demonstrate procedures for the safe transport and transfer of patients.
01.08	Describe fire, safety, disaster, and evacuation procedures.
02.0	Recognize and practice infection control procedures. The student will be able to:
02.01	Define principles of infection control, including standard and transmission-based precautions.
02.02	Demonstrate knowledge of medical asepsis and practice procedures such as handwashing and isolation.
02.03	Demonstrate knowledge of surgical asepsis.
02.04	Describe how to dispose correctly of biohazardous materials according to appropriate government guidelines, such as OSHA.
02.05	Apply infection control techniques designed to prevent the spread of diseases caused by airborne and blood-borne pathogens to the care of all patients following the Centers for Disease Control (CDC) guidelines.
02.06	Protect patient from nosocomial infection by adherence to infection control policies and procedures (standard precautions, blood and body fluid precautions, etc.)
03.0	Select, review, obtain, and interpret data. The student will be able to:

03.01	Review existing data in the patient record, and recommend diagnostic procedures based on all available patient information. • Review existing data in the patient record, including imaging and laboratory studies. • Distinguish between and report subjective and objective information.
03.02	Perform procedures and interpret results. • Assess the patient's overall cardiopulmonary status by inspection, percussion, palpation, and auscultation. • Participate in the development of the respiratory care plan.
03.03	Determine the appropriateness of the prescribed respiratory care plan, recommend modifications where indicated, and participate in the development of the respiratory care plan with established guidelines. • Review planned therapy to establish therapeutic goals. • Determine the appropriateness of prescribed therapy and goals for identified pathophysiological state. • Recommend changes in the therapeutic plan (based on data) if indicated.
04.0	Select, assemble, and check equipment for proper function, operation, and cleanliness. The student will be able to:
04.01	Select and obtain equipment, assure cleanliness of equipment, assemble, check for proper function, identify malfunctions of equipment, and take action to correct malfunctions of equipment appropriate to the respiratory care plan, which includes the following: • Medical gas delivery devices. • Humidifiers and aerosol-generating devices. • Non-invasive/invasive mechanical ventilation equipment and components. • Artificial airways. • Suctioning devices. • Gas delivery, metering, and clinical analyzing devices. • Resuscitation devices. • Hyperinflation/lung expansion devices. • Airway clearance/bronchial hygiene equipment • Airway Clearance devices/ bronchial hygiene equipment. • Pleural drainage devices. • Bronchoscopy equipment. • Noninvasive/invasive monitoring equipment. • Pulmonary Function Testing equipment.
04.02	Describe the physiologic effects, indications, and contraindications: • Medical gas delivery. • Humidification and aerosol-generating devices. • Noninvasive/invasive mechanical ventilation and its components. • Artificial airways. • Suctioning procedures. • Analyzing and metering of gas delivery. • Resuscitation techniques. • Hyperinflation/lung expansion methods. • Airway clearance/bronchial hygiene methods.

	• Noninvasive/invasive monitoring procedures. • Pulmonary Function Testing methods.
05.0	Initiate, conduct, and modify prescribed therapeutic procedures. The student will be able to:
05.01	Adapt appropriate respiratory care procedures in the patient settings to include, but not limited to, acute care, home care, sub-acute care, outpatient care, and long-term care facilities.

05.02	Conduct therapeutic procedures to stabilize and maintain a patent airway, including the care of artificial airways, and removal of bronchopulmonary secretions.
	• Establish and maintain a patient's airway.
	  o Utilize acceptable methods to maintain and secure airways.
	  o Perform tracheostomy care and/or replacement.
	• Perform removal of bronchopulmonary secretions.
	• Application of speaking valves.

05.03	Conduct therapeutic procedures to achieve adequate spontaneous and artificial ventilation. • Instruct in proper breathing techniques. • Instruct and monitor techniques of Hyperinflation/lung expansion. • Instruct and monitor techniques of airway clearance devices. • Administer/assist with directed cough (quad cough/huff cough). • Administer prescribed aerosolized medications. • Select the appropriate ventilator, including conventional and non-conventional (i.e., high-frequency ventilation). • Select, initiate, and adjust invasive ventilation device and properly manipulate settings based on patient response and data. • Select, initiate, and adjust a non-invasive ventilation device and properly manipulate settings based on patient response and data. • Manage and facilitate liberation from mechanical ventilation. • Manage withdrawal of life support. • Interpret invasive ventilator graphics and manipulate settings accordingly. • Interpret non-invasive ventilator graphics and manipulate settings accordingly. • Assist with the transport of a mechanically ventilated patient.
05.04	Conduct therapeutic procedures to achieve adequate arterial and tissue oxygenation. • Position the patient to minimize hypoxia. • Administer oxygen, with or without positive pressure. • Prevent procedure-associated hypoxia (e.g., oxygenate before and after suctioning and equipment change, etc.). • Initiate and adjust CPAP/PEEP therapy. • Initiate and adjust high-flow oxygen devices. • Initiate lung recruitment maneuvers.
05.05	Evaluate and monitor the patient's response to respiratory care through accurate interpretation of monitored data. • Measure and record vital signs. • Monitor cardiac rhythm. • Non-Invasive monitors o Monitor pulse oximetry.

	○ Monitor capnography. ○ Monitor Transcutaneous gas exchange. ○ Monitor hemodynamic values. • Auscultate, inspect, palpate, and percuss the chest and record changes. • Observe changes in sputum production and consistency. • Note the patient's subjective response to therapy. • Measure FIO2 and or liter flow. • Perform Pulmonary Function Testing. ○ Bedside spirometry ○ Peak flow ○ 6-minute walk ○ FeNO measurement ○ DLCO measurement ○ Nitrogen washout ○ Lung volumes and capacities ○ MEP and MIP • Perform arterial puncture. • Interpret results of arterial blood gas analysis and co-oximetry. • Adjust and check alarm systems. • Note the patient's response to mechanical ventilation. • Measure appropriate mechanical ventilation parameters. • Monitor endotracheal or tracheostomy tube cuff pressure.
05.06	Make necessary modifications in therapeutic procedures and recommend respiratory care plan modifications based on patient response. • Terminate treatment based on the patient's adverse reaction to therapy being administered. • Modify bronchial hygiene/airway clearance therapy. • Modify management of artificial airways. • Modify Hyperinflation/lung expansion therapy. • Modify aerosol therapy. • Modify oxygen therapy. • Modify suctioning. • Modify mechanical ventilation. • Recommend modifications in the respiratory care plan based on the patient's response.
05.07	Initiate, conduct, or modify respiratory care techniques in an emergency setting as prescribed by the American Heart Association guidelines (www.heart.org).
05.08	Evaluate and respond to an emergent loss of artificial airway.
05.09	Demonstrate an understanding of special airway management situations, such as surgical alterations of the airway, and adjust response as appropriate.

	05.10 Utilize Evidence-Based Practice when classification of disease severity and implementing treatment plan. • Lung protective strategies • NAEPP • GOLD
06.0	Demonstrate knowledge of the health care delivery system, and maintain records and communications. The student will be able to:
	06.01 Describe the various types of healthcare providers and settings.
	06.02 Identify the general roles and responsibilities of the individual members of the healthcare team.
	06.03 Use the computer system to access and input patient data, when appropriate.
	06.04 Document on medical record; record therapy and results using conventional terminology as required by hospital policy and regulatory agencies.
	06.05 Be familiar with and use the departmental policy and procedure manual; actively participate in recommending updates.
	06.06 Consistently display a professional and positive attitude in all communications, recognize the importance of courtesy and respect for patients and other healthcare workers, and maintain good interpersonal relationships.
	06.07 Participate and communicate as part of the interdisciplinary team. • Demonstrate appropriate oral and written communication skills. • Coordinate with the interdisciplinary team in arranging life support and monitoring (I.e., mechanical ventilation, apnea monitoring, nasal CPAP).
	06.08 Display respect for patients regardless of ethnicity, religion, culture, creed, gender, sexual orientation, age, or diagnosis.
	06.09 Adapt communication skills to varied levels of understanding and cultural orientation, including ethnicity, religion, culture, creed, gender, sexual orientation, age, diagnosis, and preferred learning style.
	06.10 Maintain confidentiality of all patient records and information.
07.0	Demonstrate legal and ethical responsibilities. The student will be able to:
	07.01 Explain practices that could result in malpractice, liability, negligence, abandonment, false imprisonment, and fraud.
	07.02 Explain the “Patient’s Bill of Rights”.
	07.03 Identify the standards of the Health Insurance Portability and Accountability Act (HIPAA).
	07.04 Describe advance directives.
	07.05 Describe different forms of consent, including implied, informed, and expressed.
	07.06 Recognize and report illegal and/or unethical practices of healthcare workers.

	07.07 Understand the proper laws and procedures for reporting suspected abuse and neglect in Florida.
08.0	Demonstrate knowledge of employment requirements as a respiratory care professional. The student will be able to:
	08.01 Identify the requirements to become licensed in Florida and the maintenance of the license.
	08.02 Identify National Board of Respiratory Care credential maintenance and membership requirements to maintain credentials.
	08.03 Identify the Laws and Rules related to the Florida Respiratory Care Practice Act.
	08.04 Discuss patient safety goals and any other applicable accrediting/regulatory agency guidelines.
09.0	Perform advanced respiratory care procedures. The student will be able to:
	09.01 Assume primary clinical responsibility for all respiratory care modalities.
	09.02 Verify physicians' orders or consult with physicians.
	09.03 Design and implement a respiratory care plan as appropriate.
	09.04 Perform noninvasive monitoring techniques as appropriate.
	09.05 Remove, clean, and/or replace inner cannula tube and/or replace tracheostomy tube, as indicated.
	09.06 Perform various mathematical computations dealing with cardiopulmonary assessment.
	09.07 Evaluate and apply hemodynamic monitoring to enhance care of the patient.
	09.08 Perform intubation.
	09.09 Initiate mechanical ventilation with appropriate ventilator settings and parameters.
	09.10 Monitor return to normal physiology; reestablish airway/ventilation if necessary.
	09.11 Perform extubation and/or ventilator liberation.
	09.12 Monitor and assist in procedural sedation.
10.0	Administer cardiopulmonary drugs. The student will be able to:
	10.01 Demonstrate knowledge of drug classifications, actions and uses, route of administration and usual adult doses, mathematics needed to calculate divided or children's dosage, contraindications, drug interactions, adverse reactions, how supplied, mixing instructions, storage, and laboratory test interferences.
	10.02 Perform administration of medication and medical gases following appropriate protocol and safe guidelines.

	10.03 Recommendations for pharmacologic interventions using bronchodilators, anti-inflammatory drugs, mucolytics and proteolytic, aerosolized antibiotics, inhaled pulmonary vasodilators, cardiovascular, antimicrobials, sedatives and hypnotics, analgesics, narcotic antagonists, benzodiazepine antagonists, neuromuscular blocking agents, diuretics, and surfactants.
11.0	Assist the physician with special respiratory therapy procedures. The student will have the knowledge of:
	11.01 Insertion and maintenance of an indwelling arterial or venous catheter.
	11.02 Thoracentesis, chest tube insertion, tracheostomy, intubation, and cardioversion.
	11.03 Cardiopulmonary stress testing.
12.0	Initiate and conduct patient and family education. The student will be able to:
	12.01 Demonstrate knowledge of smoking cessation products, techniques, and programs.
	12.02 Educate the patient and family in relevant safety and infection control procedures and techniques.
	12.03 Educate the patient and family on the importance of pulmonary rehabilitation and their role.
	12.04 Educate the patient and family in disease management techniques for cardiopulmonary diseases.
	12.05 Educate the patient, family, and other healthcare workers on the appropriate use, operation, cleaning, and maintenance of respiratory care equipment.

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, simulated learning activities, tools and equipment, as well as experimental, quality, and safety procedures are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate and troubleshoot equipment/tools used to make observations. Students understand measurement error; and have the skills to aggregate, interpret, and present the resulting data within an interprofessional learning environment. Equipment and supplies should be provided to enhance hands-on experiences for students.

Special Notes

This program meets the Department of Health's education requirements for HIV/AIDS, Domestic Violence and Prevention of Medical Errors. Although not a requirement for initial licensure, it is a requirement for renewal, therefore the instructor **may** provide a certificate for renewal purposes to the student verifying these requirements have been met.

If students in this program are seeking a licensure, certificate, or registration through the Department of Health, please refer to 456.0635, F.S. for more information on disqualification for a license, certificate, or registration through the Department of Health.

The respiratory therapist may be required to exercise considerable independent, clinical judgment in the respiratory care of patients under the direct or indirect supervision of a physician. Further, the therapist is capable of serving as a technical resource person to the physician with regard to current practices in respiratory care, and to the hospital staff as to effective and safe methods for administering respiratory therapy.

Outcomes 01-11 are referred to as the Health Careers Core and do not have to be completed if the student has previously completed the Core in another health science program. The CORE should be taken first in the program. Following the successful completion of the core, the student is eligible to take the National Health Care Foundation Skill Standards Assessment with instructor approval and the completion of a portfolio.

General Education Course Requirements for AS and AAS Degrees

State Board of Education Rule 6A-14.030(4), F.A.C., identifies 15 credit hours as the minimum amount of general education coursework required in the Associate of Science (AS) degree and the Associate of Applied Science (AAS) degree. In addition, Rule 6A-14.0303, F.A.C., implements s. 1007.25, F.S., and requires students entering a technical education degree program in the 2022-2023 academic year, and thereafter, to complete at least one identified core course in each subject area as part of the general education course requirements (15 credit hours total) before a degree is awarded) The core subject areas include:

- Communication.
- Humanities.
- Mathematics.
- Natural Sciences.
- Social Sciences.

Career and Technical Student Organization (CTSO)

CTSOs are co-curricular career and technical student organizations providing leadership training and reinforcing specific career and technical skills. Career and Technical Student Organizations provide activities for students as an integral part of the instruction offered. Other CTSOs not listed in this curriculum framework or recognized by the Florida Department of Education are permissible provided they support student mastery over the standards and benchmarks of this curriculum framework.

Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

Florida Department of Education
Curriculum Framework

The standards and benchmarks for this program were updated for the 2026-27 academic year.

Program Title: **Surgical First Assisting**
Career Cluster: **Health Science**

Associate in Science	
CIP Number	1351090900
Program Type	College Credit
Program Length	74 credit hours
CTSO	HOSA
SOC Codes (all applicable)	For program SOC codes, please see the Program and Course Tables section of the CTE Program Resources page linked below.
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml

Purpose

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Health Science career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of Health Science career cluster.

The program is designed to prepare students for employment as a Surgical First Assistant.

The content includes, but is not limited to, communication and interpersonal skills, legal and ethical responsibilities, anatomy, physiology, pathophysiology, microbiology, aseptic techniques, patient care procedures, surgical procedures, patient safety, use and care of equipment and supplies, CPR, Heartsaver, employability skills, basic computer literacy and surgical first assistant skills such as preoperative duties, aid in exposure, hemostasis, closure, intraoperative technical functions, and postoperative duties under the direction and supervision of the surgeon.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Program Structure

This program is a planned sequence of instruction consisting of 74 credit hours.

When developing the course sequence for the local implementation of this program, select courses that:

- Meet the skill development requirements of the standards and benchmarks of this program.
- Meet the general education core course requirements of Rule 6A-14.0303, Florida Administrative Code.
- Where reasonable and practicable, align with programs offered by your institution or other postsecondary institutions in Florida, including:
    - Related CCC and ATD credentials.
    - Baccalaureate degrees within the same career pathway and/or Federal CIP code.

Visit FloridaShines' Discover Programs website to identify other institutions that offer similar programs to review their course sequencing. Where appropriate, course alignment between institutions offering related programs can facilitate interagency student articulation.

Visit FloridaShines' Common Prerequisites Manual to identify courses that are prerequisites for admission into an upper division program. When sub-baccalaureate courses are aligned to the course admissions requirements of baccalaureate programs with the same career pathway, students can enter upper division coursework seamlessly.

Florida's Career Readiness Skills for CTE Programs

Employability Skills	
01.0	Apply academic skills to workplace scenarios.
01.01	Use reading skills.
01.02	Use writing skills.
01.03	Use mathematical strategies and procedures.
01.04	Use scientific principles and procedures.
02.0	Design a solution to an industry problem.
02.01	Use critical thinking.
02.02	Use creativity.
02.03	Make sound decisions.
02.04	Solve problems.
02.05	Reason.
02.06	Plan and organize.
03.0	Manage resources within an industry project
03.01	Manage time.
03.02	Manage money or resources.
03.03	Manage materials.
03.04	Manage personnel.
04.0	Oversee the subcomponents, operations and output of a technical or organizational system.
04.01	Manage systems.
04.02	Monitor systems.
04.03	Improve systems.
05.0	Use information for decision making.
05.01	Locate information.
05.02	Organize information.
05.03	Use information.

	05.04 Analyze information.
	05.05 Communicate information.
06.0	Apply relevant technology to workplace scenarios to aid productivity.
	06.01 Use technology.
07.0	Interpret and express interpersonal communication.
	07.01 Communicate verbally.
	07.02 Listen actively.
	07.03 Comprehend written material.
	07.04 Convey information in writing.
	07.05 Communicate nonverbally.
	07.06 Interpret nonverbal communication.
08.0	Interact with others to accomplish workplace goals.
	08.01 Collaborate with others in a team.
	08.02 Respond to customer needs.
	08.03 Exercise leadership.
	08.04 Negotiate to resolve conflict.
	08.05 Respect others.
09.0	Manage personal behavior to maximize productivity and professional growth.
	09.01 Demonstrate responsibility and self-discipline.
	09.02 Adapt and show flexibility.
	09.03 Work independently.
	09.04 Demonstrate a willingness to learn.
	09.05 Demonstrate integrity.
	09.06 Demonstrate professionalism.
	09.07 Take initiative.
	09.08 Display positive attitude.
	09.09 Take responsibility for professional growth.

Job Attainment	
10.0	Find, assess and apply to job opportunities.
10.01	Identify online job posts relevant to his or her career aspirations.
10.02	Compare and contrast the job posts' required qualifications, job duties, compensation, benefits and employers.
10.03	Define what information, documentation and writing prompts are required for the positions.
11.0	Communicate personal competence, character and fit for a job opportunity.
11.01	Develop a resume.
11.02	Write a cover letter.
11.03	Curate a professional portfolio that includes work products.
11.04	Prepare for and experience a mock job interview.
12.0	Cultivate and leverage relationships to professionally advance.
12.01	Request a signed reference letter, letter of recommendation and/or an online skill/professionalism endorsement.
12.02	Develop a plan to cultivate a professional digital footprint.
12.03	Develop a networking plan for a specific industry of interest.

Standards

After successfully completing this program, the student will be able to perform the following:

01.0 Demonstrate knowledge of the health care delivery system and health occupations.
02.0 Demonstrate the ability to communicate and use interpersonal skills effectively.
03.0 Demonstrate legal and ethical responsibilities.
04.0 Demonstrate an understanding of and apply wellness and disease concepts.
05.0 Recognize and practice safety and security procedures.
06.0 Recognize and respond to emergency situations.
07.0 Recognize and practice infection control procedures.
08.0 Demonstrate an understanding of information technology applications in healthcare.
09.0 Demonstrate employability skills.
10.0 Demonstrate knowledge of blood-borne diseases, including HIV/AIDS.
11.0 Apply basic math and science skills.
12.0 Demonstrate sterile processing skills.
13.0 Demonstrate competencies in the components of the Surgical First Assistant related to communication and interpersonal skills.
14.0 Demonstrate an understanding of the basic sciences related to Surgical First Assisting.
15.0 Describe and practice safety measures in the surgical environment.
16.0 Perform patient care procedures related to the surgical environment and describe methods for meeting patients' needs.
17.0 Demonstrate knowledge of pharmacology and math calculation principles related to the surgical environment.
18.0 Demonstrate knowledge of the basic surgical skills necessary to function safely and effectively.
19.0 Demonstrate competencies in the components of the Surgical First Assistant related to knowledge and skills.
20.0 Demonstrate competencies in the components of the Surgical First Assistant related to legal and ethical responsibilities.
21.0 Demonstrate advanced skills competency regarding professional managerial skills.
22.0 Demonstrate the ability to analyze communication critically in the general education components of the program.
23.0 Demonstrate competency in critical reflection related to the human condition, interpretive abilities, and cultural literacy in the general education components of the program.
24.0 Demonstrate the ability to apply mathematical concepts and mathematical/computational models and methods in problem solving in the general education components of the program.
25.0 Demonstrate the ability to examine behavioral, social, and cultural issues from a variety of points of view.

Florida Department of Education
Student Performance Standards

Program Title: **Surgical First Assisting**
CIP Number: **1351090900**
Program Length: **74 credit hours**

Standards 1-11 are referred to as the **Health Science Core** and are required standards in this program. Secondary and Postsecondary students completing the health science core will not have to repeat the core in any other health science program in which it is a part. When the recommended sequence is followed, the structure allows students to complete at specified points for employment or remain for advanced training or cross-training.

To ensure consistency whenever these courses are offered, the health science core standards (1-11) and benchmarks have been placed in a separate document. To access this document, visit this link:
https://www.fldoe.org/core/fileparse.php/20569/urlt/health-sci-core-psav-cc-2324.rtf

At the completion of this program, the student will be able to:	
12.0	Demonstrate sterile processing skills. The student will be able to:
12.01	Apply the principles of medical/surgical asepsis, including attire, environmental control, and traffic patterns, to control and manage dirty, clean, and sterile areas of the operating room and central supply.
12.02	Identify relevant federal, state, and local guidelines, standards, and regulations.
12.03	Apply ergonomic considerations and appropriate body mechanics for lifting, turning, pulling, pushing, reaching, and other work-related activities.
12.04	Describe the methods of disinfection and sterilization.
12.05	Describe the importance of following the device, equipment, instrument, or supply manufacturer's instructions for decontamination, processing, operation, and troubleshooting.
12.06	Demonstrate correctly decontamination techniques for instruments, equipment, and the environment used during surgical procedures.
12.07	Demonstrate appropriate techniques for inspection, testing, and sending out for repair instruments, equipment, and supplies regarding condition, quantity, and quality.
12.08	Describe clean and sterile transportation, restocking, and storage principles for instruments.
12.09	Analyze the results of sterilization process monitors used in sterilization units, sterilization cycles, and ensure documentation meets the safe parameters for each item prior to its use.
12.10	Describe the clean and sterile transportation, restocking, and storage principles for supplies in the facility (receivables, sterile, and clean).

	12.11 Demonstrates the ability to identify and communicate the appropriate instruments, equipment, and supplies to the surgical team for any surgical procedure.
	12.12 Demonstrate the ability to prepare and label items for high-level disinfection and sterilization as required.
	12.13 Demonstrate the techniques of high-level disinfection and the process for Immediate Use Steam Sterilization when necessary (i.e., one-of-a-kind items).
	12.14 Describe various supply, distribution, and inventory control methods.
	12.15 Demonstrate the ability to verify case cart preparation and management.
13.0	Demonstrate competencies in the components of the Surgical First Assistant related to communication and interpersonal skills. The student will be able to:
	13.01 Demonstrate proper use of communication systems.
	13.02 Use various forms of communication in the role of Surgical First Assistant to communicate relevant, accurate, and complete information in a concise and clear manner.
	13.03 Collaborate with the patient, surgeon, and other members of the healthcare team to assess, plan, implement, and evaluate the patient's surgical care to promote positive outcomes, including the use of preoperative checklists, preoperative assessment, and evaluation methods.
	13.04 Demonstrate effective patient communication techniques.
	13.05 Demonstrate the ability to analyze and communicate specific patient care factors or needs and the surgeon's preferences to the surgical team, including suture needs, specialty supplies and instrumentation, and equipment.
	13.06 Describe the concepts of conflict resolution, assertive behavior, and the principles of teamwork as a patient advocate and assistant to the surgeon.
	13.07 Demonstrate competency regarding reporting and documentation responsibilities in the clinical setting.
	13.08 Employ leadership skills to accomplish the organization's goals and objectives.
	13.09 Establish and maintain effective working relationships with others in order to accomplish objectives and tasks.
	13.10 Conduct and participate in meetings to accomplish work tasks.
	13.11 Employ mentoring skills to support inexperienced team members.
14.0	Demonstrate an understanding of the basic sciences related to Surgical First Assisting. The student will be able to:
	14.01 Apply knowledge of the microbial environment to the surgical care of the patient.
	14.02 Analyze patient defense mechanisms, the chain of infection, and the infectious process as related to surgical practice and the prevention of surgical site infections.
	14.03 Correlate wound classifications and wound healing principles with wound management guidelines and complications.

	14.04	Demonstrate infection and disease transmission control techniques following the Centers for Disease Control (CDC) and Occupational Safety and Health Administration (OSHA) guidelines for surgery.
	14.05	Describe the causes, clinical signs and symptoms, and prevention measures for surgical infections.
	14.06	Describe the basic composition, principles, clinical signs, and symptoms regarding electrolytes and fluid balance.
	14.07	Assess the clinical signs of hypovolemic, septic, hemorrhage, neurogenic, and cardiogenic shock.
	14.08	Correlate the principles and disorders of hematology, hemostasis, types of blood components, and coagulation with hemostasis in surgery.
	14.09	Discuss the principles of information technology, electricity, and robotics as they relate to surgery.
15.0	Describe and practice safety measures in the surgical environment. The student will be able to:	
	15.01	Inspect emergency equipment and supplies for condition and quantity.
	15.02	Implement appropriate Joint Commission patient safety goals.
	15.03	Demonstrate appropriate safety measures to prevent operating room fires and electrical shock from equipment.
	15.04	Apply knowledge of surgical hazards to safe patient care.
	15.05	Demonstrate the safe inspection and utilization of laser, electrical, endoscopic, and robotic equipment.
	15.06	Describe and practice appropriate safety measures for laser, electrical, endoscopic, and robotic surgery.
	15.07	Describe the role preventive maintenance, prevention, correction, and documentation play in patient and personnel safety and the prevention of medical errors in the surgical setting.
	15.08	Describe the role of the surgical technologist and surgical first assistant in an emergency patient situation.
	15.09	Describe the protocol for personal injury, including the completion of incident/occupancy reports and follow-up.
	15.10	Describe the preparation and planning, detection and communication, incident management and support systems, safety and security, clinical/public health assessment and intervention, contingency, continuity and recovery, and the public health law and ethics of All-Hazards Preparation for disasters.
	15.11	Conduct technical research to gather information for decision-making.
	15.12	List and describe quality control systems and/or practices common to the workplace.
	15.13	Employ critical thinking skills independently and in teams to solve problems, resolve conflicts, and make decisions.
16.0	Perform patient care procedures related to the surgical environment and describe methods for meeting patients' needs. The student will be able to:	

16.01	Identify the roles of the members of the surgical team during each phase of surgery.
16.02	Assist surgeon with the perioperative care of the surgical patient.
16.03	Participate in the preoperative examination and preparation process for both surgery and anesthesia, with the identification of potential patient factors that may inhibit positive outcomes.
16.04	Describe appropriate review and identification of patient factors regarding the chart, including preoperative identification, preoperative checklists, diagnostic tests, lab values, and surgical consent.
16.05	Demonstrate safe patient transfer/transportation techniques used in the perioperative setting.
16.06	Monitor OR traffic, placement of sterile tables, and ensure steps are taken to reduce microbial fallout.
16.07	Describe anesthesia monitoring devices, patient complications, interventions, and maintaining patient homeostasis.
16.08	Demonstrate the principles of safe positioning and application of safety devices to ensure patient safety.
16.09	Demonstrate the selection of the appropriate solution and preparation of the operative site for the surgical procedure.
16.10	Perform steps for Foley catheter insertion and connection to drainage.
16.11	Describe the safe usage of critical instruments, equipment, and supplies utilized intraoperatively, including the electrosurgical unit, Lasers, Ultrasonic equipment, endoscopy equipment, robotics, insufflators, light sources, microscopes, power tools, suction, tourniquets, etc.
16.12	Demonstrate correctly the connection and operation of essential instruments, equipment, and supplies for the surgical procedure.
16.13	Demonstrate correct mathematical skills related to dosage available versus dosage needed when drawing up or administering medications.
16.14	Demonstrate knowledge of wound management techniques, including suturing techniques in the operating room, perioperative care of special needs patients, and perioperative assessment of the skin.
16.15	Demonstrate applicable wound management principles, including the placement and security of catheters, wound drainage systems, sterile dressings, and cast applications.
16.16	Discuss relevant and unique factors regarding postoperative care specific to the procedure.
17.0	Demonstrate knowledge of pharmacology and math calculation principles related to the surgical environment. The student will be able to:
17.01	Analyze the terminology and the basic concepts of pharmacology and drug administration, including pharmacokinetics and pharmacodynamics.
17.02	Describe pharmacological concepts relative to the administration of all anesthesia methods, agents, and techniques, including the role of the anesthetist, the first assistant, and the circulator during induction and extubation.
17.03	Analyze preoperative principles of patient assessment and how they relate to anesthesia.
17.04	Identify the classification, actions, effects, and precautions of common drugs used at the field within the surgical environment.

17.05	Apply knowledge of the pharmacologic agents used in the treatment of the surgical patient.
17.06	Describe potential anesthesia and operative complications and interventions for each.
17.07	Demonstrate the application of the Six Rights of Medication Administration.
17.08	Identify the correct medication form and method of application.
17.09	Demonstrate correct techniques for injection of local anesthetics.
17.10	Analyze and assemble correctly all medication supplies for each drug to be used on the sterile field.
17.11	Manage sterile solutions accurately within the sterile field.
17.12	Demonstrate the appropriate methods of transferring and accepting medications onto the sterile field.
17.13	Label properly all fluids and medications used within the sterile field.
17.14	Demonstrate the ability to correctly calculate common medication conversions and dosages.
17.15	Assess the risks and adverse effects of anesthesia, conscious sedation, local anesthesia agents, and pain management in the surgical setting.
17.16	Describe the function and its implications of anesthesia, conscious sedation, local anesthesia agents, and pain management as they relate to the preoperative patient.
17.17	Maintain accurate documentation of the amount of each medication and/or solution used at the field and notify the circulator as appropriate
17.18	Explain the principles of local injection techniques and topical anesthetic agents.
18.0	Demonstrate knowledge of the basic surgical skills necessary to function safely and effectively. The student will be able to:
18.01	Demonstrate an understanding of advanced anatomy, physiology, disease processes, and the relationship of the processes to the specific types of pathologies according to body systems.
18.02	Correlate the preoperative diagnosis, diagnostic interventions, common complications, and operative pathophysiology relative to specific surgical procedures.
18.03	Correlate the preoperative diagnosis, operative anatomy, physiology and pathology, usual incision, wound closure techniques, medications utilized, common complications, and the usual sequence as related to specific surgical procedures.
18.04	Select and verify required instrumentation, equipment, and supplies, including any implants needed for specific surgical procedures using core knowledge and the applicable surgeon preference/procedure cards.
18.05	Demonstrate an understanding of diagnostic images as related to surgical anatomy.
18.06	Demonstrate application of aseptic and sterile technique principles, including the appropriate corrective action for common breaks in sterile technique that may occur.

18.07	Demonstrate the surgical scrub and donning of a sterile gown and gloves.
18.08	Demonstrate the principles of sterile draping.
18.09	Demonstrate assisted gowning/gloving for others.
18.10	Participate in the surgical time out to prevent wrong-site surgery and delays in the surgical procedure.
18.11	Select, prepare, pass, and utilize instruments, equipment, tissue replacement materials, implants, and supplies efficiently.
18.12	Monitor the surgical site regarding counted items, stage of surgery, tissue appearance, and patient's body fluids, e.g., blanching, desiccation, color of blood, blood loss, bile leaks, ascites, etc.
18.13	Demonstrate correctly the initiation and completion of counts regarding sponges, sharps, instruments, and miscellaneous items used within the patient's wound to prevent foreign body retention.
18.14	Describe the types of incisions, methods of wound closure, and mechanisms of wound management.
18.15	Describe the usual sequence of a common surgical procedure. (i.e., incision into the anatomy, dissection of the anatomy, operative steps of the procedure, and closing of the anatomy).
18.16	Selects the appropriate instrument, equipment, or supply for each step of the procedure.
18.17	Demonstrate ability to prepare, validate, handle, and preserve specimens accurately for laboratory analysis.
18.18	Demonstrates knowledge of and assists as needed with surgical procedures while functioning in the roles of scrub and assistant circulator.
18.19	Demonstrate effective perioperative case management, ensuring cost control and time/motion economy methods are utilized to maximize the efficiency of the OR team.
19.0	Demonstrate competencies in the components of the Surgical First Assistant related to knowledge and skills. The student will be able to:
19.01	Prioritize care or actions to be taken in a given circumstance to expedite the operative procedure or emergency situation.
19.02	Describe preoperative diagnosis, common complications, operative pathophysiology, and postoperative care related to the specific surgical procedures performed.
19.03	Analyze common patient assessments, including skin and chart review, relating relevant diagnostic and monitoring results to the surgeon as applicable to the surgical specialty.
19.04	Demonstrate preoperative preparation of the patient to facilitate proper patient care, including but not limited to positioning, application of tourniquet, surgical skin preparation, catheterization, draping, and sterile setup preparation.
19.05	Demonstrate and describe types of incisions and insertion of trocars.
19.06	Identify types of tissue, organs, and gross anatomical structures correctly during surgical procedures.
19.07	Demonstrate appropriate tissue handling techniques, including the care of the surgical specimens.

19.08	Provide appropriate exposure and visualization of the operative field for the surgeon.
19.09	Describe the appropriate sequence for common surgical procedures.
19.10	Utilize appropriate techniques to assist with hemostasis.
19.11	Demonstrate appropriate safe surgical techniques when the case involves either thermal, radiological, laparoscopic, environmental, or another known surgical hazard.
19.12	Participate in volume replacement or autotransfusion techniques and medication administration as appropriate.
19.13	Select appropriate instruments and supplies for the type of tissue.
19.14	Demonstrate competence with technology, the use of instruments, equipment, supplies, and medications for the surgical procedure.
19.15	Use surgical instruments skillfully in ways consistent with their design and purpose.
19.16	Utilize appropriate techniques to assist with the closure of body planes.
19.17	Select and apply appropriate wound dressings.
19.18	Assist the surgeon in securing drainage systems to tissue.
19.19	Evaluate the patient and report appropriately any abnormal condition found post-op related to positioning.
19.20	Assist the surgeon with postoperative care of the patient to facilitate proper patient care.
19.21	Demonstrate appropriate response to emergency situations, including respiratory/cardiac arrest situations, sudden hypoxia, hemorrhage, shock, surgical misadventures, contamination, perforation of viscus or cavity, critical equipment failure, and exposure, retraction, and compression injuries.
19.22	Facilitate the continuity of care within and across the healthcare settings to access available resources and services.
20.0	Demonstrate competencies in the components of the Surgical First Assistant related to legal and ethical responsibilities. The student will be able to:
20.01	State methods, standards, and aids that assist a surgical first assistant with interpreting and following legal responsibilities.
20.02	Describe the importance of maintaining credentials and following the appropriate credentialing policy in accordance with hospital policy and appropriate laws and regulations.
20.03	Explain the scope of practice for the surgical first assistant.
20.04	Describe the key elements related to the development of a surgical conscience.
20.05	Explain the purpose of Florida’s “Right to Know” law and its provisions.
20.06	Demonstrate an understanding of the legal, ethical, moral, and professional responsibilities of working as a surgical assistant and the

	professional skills necessary to fulfill the role.
	20.07 Provide health care within the ethical/legal framework of the job description, including role responsibilities and limitations.
	20.08 Describe the principles of problem solving and confidentiality in ethical decision making and risk management.
	20.09 Define current strategies that promote patient safety and continuous improvement (i.e., Six Sigma and Lean Management).
21.0	Demonstrate advanced skills competency regarding professional managerial skills. The student will be able to:
	21.01 Demonstrate the ability to communicate effectively during mock briefing and debriefing exercises.
	21.02 Analyze the potential risks and errors found in healthcare and methods to prevent those risks.
	21.03 Describe the mechanism of change, policy formation, and implementation.
	21.04 Describe the process of performance appraisal.
	21.05 Describe how to promote positive patient outcomes through effective followership and leadership.
22.0	Demonstrate the ability to analyze communication critically in the general education components of the program. The student will be able to:
	22.01 Demonstrate the ability to communicate effectively.
	22.02 Demonstrate the ability to analyze communication critically.
23.0	Demonstrate competency in critical reflection related to the human condition, interpretive abilities, and cultural literacy in the general education components of the program. The student will be able to:
	23.01 Confirm the ability to think critically through demonstrating interpretive ability and cultural literacy.
	23.02 Acquire competence in reflecting critically upon the human condition.
24.0	Demonstrate the ability to apply mathematical concepts and mathematical/computational models and methods in problem solving in the general education components of the program. The student will be able to:
	24.01 Determine appropriate mathematical and computational models and methods in problem solving.
	24.02 Demonstrate an understanding of mathematical concepts.
	24.03 Apply appropriate mathematical and computational models and methods in problem solving.
25.0	Demonstrate the ability to examine behavioral, social, and cultural issues from a variety of points of view. The student will be able to:
	25.01 Describe cultural, religious, or ethical differences that could influence perceptions of an event or situation.

25.02	Describe basic social and behavioral science concepts and principles used in the analysis of behavioral, social, and cultural issues from historical and global perspectives.

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools, and equipment, as well as experimental, quality, and safety procedures, are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate, and troubleshoot equipment/tools used to make observations. Students understand measurement error and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

The Human Patient Simulator (HPS) or other accepted simulation scenarios may be used for a limited number of clinical hours. A low teacher-student ratio in the lab and clinical area is strongly recommended. The recommended maximum ratio is 1:8.

Special Notes

This program focuses on broad, transferable skills and stresses understanding and demonstration of the following elements of the health care industry: planning, management, finance, technical and production skills, underlying principles of technology, labor issues, community issues and health, safety, and environmental issues.

This program meets the Department of Health's education requirements for HIV/AIDS, Domestic Violence, and Prevention of Medical Errors. Although not a requirement for initial licensure, it is a requirement for renewal, therefore, the instructor **may** provide a certificate for renewal purposes to the student verifying these requirements have been met.

If students in this program are seeking a licensure, certificate, or registration through the Department of Health, please refer to 456.0635, F.S. for more information on disqualification for a license, certificate, or registration through the Department of Health.

The Surgical First Assistant Core Curriculum should be taught by qualified staff as outlined in the most recent approved Commission on Accreditation on Allied Health Education programs (CAAHEP) accreditation standards and guidelines.

Entering students who have successfully completed the program 0351090905 or 0351090904, Surgical Technology, or are currently Nationally Certified as a CST (Certified Surgical Technologist) or SA-C (Surgical Assistant-Certified) should be given appropriate advanced standing.

After successful completion of a Commission on Accreditation on Allied Health Education Programs (CAAHEP) accredited surgical first assistant program, students are eligible to take the National Board of Surgical Technology and Surgical Assisting First Assistant exam as approved.

The standard length for the AS degree program is 74 college credits.

The CORE should be taken first in the program. Following the successful completion of the core, the student is eligible to take the National Health Care Foundation Skill Standards Assessment with instructor approval and the completion of a portfolio.

General Education Course Requirements for AS and AAS Degrees

State Board of Education Rule 6A-14.030(4), F.A.C., identifies 15 credit hours as the minimum amount of general education coursework required in the Associate of Science (AS) degree and the Associate of Applied Science (AAS) degree. In addition, Rule 6A-14.0303, F.A.C., implements s. 1007.25, F.S., and requires students entering a technical education degree program in the 2022-2023 academic year, and thereafter, to complete at least one identified core course in each subject area as part of the general education course requirements (15 credit hours total) before a degree is awarded. The core subject areas include:

- Communication.
- Humanities.
- Mathematics.
- Natural Sciences.
- Social Sciences.

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Certificate Programs

A College Credit Certificate consists of a program of instruction of less than sixty (60) credits of college-level courses, which is part of an AS or AAS degree program and prepares students for entry into employment (Rule 6A-14.030, F.A.C.). This AS degree program includes the following College Credit Certificates:

Surgical First Assistant (0351090908) – 59 Credits

Standards for the above certificate programs are contained in separate curriculum frameworks.

Florida Department of Education
Curriculum Framework

The standards and benchmarks for this program were updated for the 2026-27 academic year.

Program Title: **Surgical Services**
Career Cluster: **Health Science**

Associate in Science	
CIP Number	1351090901
Program Type	College Credit
Program Length	64 credit hours
CTSO	HOSA
SOC Codes (all applicable)	For program SOC codes, please see the Program and Course Tables section of the CTE Program Resources page linked below.
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml

Purpose

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Health Science career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of Health Science career cluster.

The program focuses on a core program of broad transferable skills and stresses understanding and demonstration of the following elements for employment in a specialized health science career field. The program specialization component focuses on advanced technical skills in a chosen healthcare-targeted occupation, including the applicable healthcare technology and healthcare applications.

The content includes but is not limited to communication skills, leadership skills, human relations, interpersonal skills, legal and ethical responsibilities, employability skills, anatomy, medical terminology, microbiology and infection control, the health care organization, health, safety and quality, use and care of standard equipment and supplies, CPR/Heart saver, and basic computer literacy.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Program Structure

This program is a planned sequence of instruction consisting of 64 credit hours.

When developing the course sequence for the local implementation of this program, select courses that:

- Meet the skill development requirements of the standards and benchmarks of this program.
- Meet the general education core course requirements of Rule 6A-14.0303, Florida Administrative Code.
- Where reasonable and practicable, align with programs offered by your institution or other postsecondary institutions in Florida, including:
    - Related CCC and ATD credentials.
    - Baccalaureate degrees within the same career pathway and/or Federal CIP code.

Visit FloridaShines' Discover Programs website to identify other institutions that offer similar programs to review their course sequencing. Where appropriate, course alignment between institutions offering related programs can facilitate interagency student articulation.

Visit FloridaShines' Common Prerequisites Manual to identify courses that are prerequisites for admission into an upper division program. When sub-baccalaureate courses are aligned to the course admissions requirements of baccalaureate programs with the same career pathway, students can enter upper division coursework seamlessly.

Florida's Career Readiness Skills for CTE Programs

Employability Skills	
01.0	Apply academic skills to workplace scenarios.
	01.01 Use reading skills.
	01.02 Use writing skills.
	01.03 Use mathematical strategies and procedures.
	01.04 Use scientific principles and procedures.
02.0	Design a solution to an industry problem.
	02.01 Use critical thinking.
	02.02 Use creativity.
	02.03 Make sound decisions.
	02.04 Solve problems.
	02.05 Reason.
	02.06 Plan and organize.
03.0	Manage resources within an industry project
	03.01 Manage time.
	03.02 Manage money or resources.
	03.03 Manage materials.
	03.04 Manage personnel.
04.0	Oversee the subcomponents, operations and output of a technical or organizational system.
	04.01 Manage systems.
	04.02 Monitor systems.
	04.03 Improve systems.
05.0	Use information for decision making.
	05.01 Locate information.
	05.02 Organize information.
	05.03 Use information.

	05.04 Analyze information.
	05.05 Communicate information.
06.0	Apply relevant technology to workplace scenarios to aid productivity.
	06.01 Use technology.
07.0	Interpret and express interpersonal communication.
	07.01 Communicate verbally.
	07.02 Listen actively.
	07.03 Comprehend written material.
	07.04 Convey information in writing.
	07.05 Communicate nonverbally.
	07.06 Interpret nonverbal communication.
08.0	Interact with others to accomplish workplace goals.
	08.01 Collaborate with others in a team.
	08.02 Respond to customer needs.
	08.03 Exercise leadership.
	08.04 Negotiate to resolve conflict.
	08.05 Respect others.
09.0	Manage personal behavior to maximize productivity and professional growth.
	09.01 Demonstrate responsibility and self-discipline.
	09.02 Adapt and show flexibility.
	09.03 Work independently.
	09.04 Demonstrate a willingness to learn.
	09.05 Demonstrate integrity.
	09.06 Demonstrate professionalism.
	09.07 Take initiative.
	09.08 Display positive attitude.
	09.09 Take responsibility for professional growth.

Job Attainment	
10.0	Find, assess and apply to job opportunities.
10.01	Identify online job posts relevant to his or her career aspirations.
10.02	Compare and contrast the job posts' required qualifications, job duties, compensation, benefits and employers.
10.03	Define what information, documentation and writing prompts are required for the positions.
11.0	Communicate personal competence, character and fit for a job opportunity.
11.01	Develop a resume.
11.02	Write a cover letter.
11.03	Curate a professional portfolio that includes work products.
11.04	Prepare for and experience a mock job interview.
12.0	Cultivate and leverage relationships to professionally advance.
12.01	Request a signed reference letter, letter of recommendation and/or an online skill/professionalism endorsement.
12.02	Develop a plan to cultivate a professional digital footprint.
12.03	Develop a networking plan for a specific industry of interest.

Standards

After successfully completing this program, the student will be able to perform the following:

01.0 Demonstrate knowledge of the healthcare delivery system and health occupations.
02.0 Demonstrate the ability to communicate and use interpersonal skills effectively.
03.0 Demonstrate legal and ethical responsibilities.
04.0 Demonstrate an understanding of and apply wellness and disease concepts.
05.0 Recognize and practice safety and security procedures.
06.0 Recognize and respond to emergency situations.
07.0 Recognize and practice infection control procedures.
08.0 Demonstrate an understanding of information technology applications in healthcare.
09.0 Demonstrate employability skills.
10.0 Demonstrate knowledge of blood-borne diseases, including HIV/AIDS.
11.0 Apply basic math and science skills.
12.0 Demonstrate language arts knowledge and skills.
13.0 Solve problems using critical thinking skills, creativity, and innovation.
14.0 Describe the roles within teams, work units, departments, organizations, inter-organizational systems, and the larger environment.
15.0 Demonstrate leadership and teamwork skills needed to accomplish team goals and objectives.

In addition, students will complete the objectives in one of the following specialization tracks:

Standards 16-25 must be completed by students specializing in the Sterile Processing Technician Track.
16.0 Demonstrate the ability to recall, dispose of, or reprocess sterile supplies/instruments.
17.0 Identify fundamentals of the supply chain.
18.0 Demonstrate the roles and responsibilities of the sterile processing technician.
19.0 Recognize basic principles of microbiology.
20.0 Interpret and apply medical terminology and anatomical terms as they relate to equipment and supplies issued by the sterile processing department.
21.0 Describe how sterile processing is involved in controlling infections in healthcare facilities.
22.0 Explain the purpose of the Occupational Safety and Health Act (OSHA).
23.0 Receive, decontaminate, clean, prepare, disinfect, and sterilize reusable items.
24.0 Demonstrate the use of sterilization process monitors, including proper utilization of appropriate chemical indicators and bacterial spore tests for all sterilizers.
25.0 Demonstrate the ability to identify and select appropriate instrumentation or equipment that meets the needs of the surgical specialty.

Standards 26- 33 must be completed by students specializing in the Endoscopic Technician Track.
26.0 Demonstrate endoscopic technician skills.
27.0 Demonstrate competencies in the components of the endoscopic technician related to communication and interpersonal skills.
28.0 Demonstrate an understanding of the basic sciences related to endoscopy.

29.0 Describe and practice safety measures in the endoscopic environment.
30.0 Perform patient care endoscopic procedures related to the endoscopic environment and describe methods for meeting patients' needs.
31.0 Demonstrate knowledge of the basic endoscopy skills necessary to function safely and effectively.
32.0 Demonstrate competencies in the components of the endoscopic technician related to knowledge and skills.
33.0 Demonstrate competencies in the components of the endoscopic technician related to legal and ethical responsibilities.

Standards 34- 42 must be completed by students specializing in the Surgical Technician Track.
34.0 Demonstrate sterile processing skills.
35.0 Use communication and interpersonal skills related to surgical technology.
36.0 Demonstrate an understanding of the basic sciences related to surgical technology.
37.0 Demonstrate knowledge of anesthesia, pharmacology, and math calculation principles related to the surgical environment.
38.0 Describe and demonstrate safety measures in the surgical environment.
39.0 Assist the Registered Nurse (RN) with patient care procedures related to the surgical environment and describe methods for meeting patients' needs.
40.0 Demonstrate knowledge of the skills necessary for perioperative case management.
41.0 Demonstrate knowledge of and assist with surgical procedures.
42.0 Demonstrate an understanding of legal and ethical responsibilities specific to surgical technology.

Florida Department of Education
Student Performance Standards

Program Title: **Surgical Services**
CIP Number: **1351090901**
Program Length: **64 credit hours**

Standards 1-11 are referred to as the **Health Science Core** and are required standards in this program. Secondary and Postsecondary students completing the health science core will not have to repeat the core in any other health science program in which it is a part. When the recommended sequence is followed, the structure allows students to complete at specified points for employment or remain for advanced training or cross-training.

To ensure consistency whenever these courses are offered, the health science core standards (1-11) and benchmarks have been placed in a separate document. To access this document, visit this link:
https://www.fldoe.org/core/fileparse.php/20569/urlt/health-sci-core-psav-cc-2324.rtf

At the completion of this program, the student will be able to:	
12.0	Demonstrate language arts knowledge and skills. The student will be able to:
12.01	Locate, comprehend, and evaluate key elements of oral and written information.
12.02	Draft, revise, and edit written documents using correct grammar, punctuation, and vocabulary.
12.03	Present information formally and informally for specific purposes and audiences.
13.0	Solve problems using critical thinking skills, creativity, and innovation. The student will be able to:
13.01	Employ critical thinking skills independently and in teams to solve problems and make decisions.
13.02	Employ critical thinking and interpersonal skills to resolve conflicts.
13.03	Identify and document workplace performance goals and monitor progress toward those goals.
13.04	Conduct technical research to gather information necessary for decision-making.
14.0	Describe the roles within teams, work units, departments, organizations, inter-organizational systems, and the larger environment. The student will be able to:
14.01	Describe the nature and types of healthcare organizations.
14.02	Describe the effect of key organizational systems on performance and quality.
14.03	List and describe quality control systems and/or practices common to the workplace.

	14.04 Describe the impact of the global economy on healthcare organizations.
15.0	Demonstrate leadership and teamwork skills needed to accomplish team goals and objectives. The student will be able to:
	15.01 Employ leadership skills to accomplish organizational goals and objectives.
	15.02 Establish and maintain effective working relationships to accomplish objectives and tasks.
	15.03 Conduct and participate in meetings to accomplish work tasks.
	15.04 Employ mentoring skills to inspire and teach others.
	15.05 Analyze attributes and attitudes of an effective leader.
	15.06 Recognize factors and situations that may lead to conflict.
	15.07 Demonstrate effective techniques for managing team conflict.
	15.08 Demonstrate the understanding of the importance of effective interdepartmental relationships.
Standards 16-25 are necessary for those completing the Sterile Processing Technician Specialization Track.	
16.0	Demonstrate the ability to recall, dispose of, or reprocess sterile supplies/instruments. The student will be able to:
	16.01 Explain the factors that affect how long a package can be considered safe for use.
	16.02 Explain the differences between event-related, date-related, and manufacturer recommendations.
	16.03 State the methods of determining expiration dates.
	16.04 List the steps in reprocessing outdated hospital packaged items.
	16.05 List conditions that would make a product unsafe for use.
	16.06 Describe the use of tamper-evident seals.
	16.07 Describe the methods of reprocessing.
	16.08 Identify standards and facility policies on the reprocessing of single-use items.
	16.09 Describe the process of recall for medical/surgical supplies.
17.0	Identify fundamentals of the supply chain. The student will be able to:
	17.01 Describe the process of supply chain management.

	17.02 Communicate with other hospitals, facilities, or company representatives for the procurement of supplies and equipment.
	17.03 Describe several different methods of procurement of supplies.
	17.04 Describe the basics of receiving items and distributing items to other facilities, which must include documentation.
18.0	Demonstrate the roles and responsibilities of the sterile processing technician. The student will be able to:
	18.01 Describe professional standards related to personal hygiene and dress codes for the sterile processing worker to include appropriate personal protective equipment (PPE).
	18.02 Identify relevant federal, state, and local guidelines, standards, and regulations.
	18.03 Describe the organization, function, and workflow of the sterile processing department.
	18.04 Apply ergonomic considerations and appropriate body mechanics for lifting, turning, pulling, pushing, and reaching.
	18.05 Apply policies and procedures related to sterile processing functions (safety, infection control, disaster control, material safety data sheets (MSDS), incident reports, etc.).
	18.06 Apply infection control techniques following the Centers for Disease Control (CDC) guidelines.
	18.07 Describe the importance of following the device, equipment, instrument, or supply manufacturer's instructions for processing, operation, and troubleshooting.
	18.08 Demonstrate the process of stock rotation.
	18.09 Describe the processes for loaner instrumentation and equipment.
	18.10 Demonstrate the methods of case cart preparation and the utilization of preference cards.
19.0	Recognize basic principles of microbiology. The student will be able to:
	19.01 Describe terms related to microbiology and the control of microorganisms in sterile processing departments.
	19.02 Identify the main categories and life functions of microorganisms.
	19.03 Describe conditions affecting the growth of bacteria.
	19.04 Describe special methods used to destroy harmful microorganisms on fomites in the environment.
	19.05 List the conditions where microorganisms may be helpful.
	19.06 Describe how the body controls the growth of pathogenic microorganisms.
	19.07 Identify pathogenic microorganisms commonly found in sterile processing departments.

20.0	Interpret and apply medical terminology and anatomical terms as they relate to equipment and supplies issued by the sterile processing department. The student will be able to:
20.01	Identify prefixes, roots, and suffixes for medical terms used by the sterile processing department.
20.02	Relate anatomical concepts to surgical devices, other supplies, and equipment issued by sterile processing.
21.0	Describe how sterile processing is involved in controlling infections in healthcare facilities. The student will be able to:
21.01	Describe nosocomial infections.
21.02	Describe droplet, airborne, bloodborne, and contact isolation protocols.
21.03	Describe the sterile processing responsibilities for infection control and traffic patterns when in the operating room and other departments.
21.04	Identify proper storage and transportation standards for supplies in the facility (receivables, sterile, clean, or contaminated).
22.0	Explain the purpose of the Occupational Safety and Health Act (OSHA). The student will be able to:
22.01	Describe how employees are protected under OSHA.
22.02	Describe potential workplace hazards in sterile processing, such as wet floors, chemicals, fumes, gases, steam, electrical outlets, body fluids, microorganisms, sharps, and medical wastes.
22.03	Describe the role preventive maintenance plays in patient and personnel safety in the healthcare facility.
22.04	Explain the purpose of Florida's "Right to Know" law and its provisions.
22.05	Describe the protocol for personal injury, including the completion of incident/occupancy reports and follow-up.
22.06	Implement appropriate regulatory and accreditation agency patient safety guidelines.
23.0	Receive, decontaminate, clean, prepare, disinfect, and sterilize reusable items. The student will be able to:
23.01	Describe the importance of thorough cleaning to the overall objectives of making items safe for patient use.
23.02	Explain the importance of following manufacturers’ instructions in cleaning each item for reprocessing.
23.03	Describe the levels of disinfection.
23.04	Describe the cleaning processes and methods of disinfection for the environment, instruments, syringes, needles, rubber goods, and equipment.
23.05	Describe the mechanisms of action for each disinfection method, including ultrasonic machines and washer/sterilizers.
23.06	Describe the strategies for managing difficult-to-control microorganisms that require isolation techniques and specialized decontamination methods, including Creutzfeldt-Jakob disease (CJD).

23.07	Describe the factors affecting decontamination, such as water temperature, loading procedures, water impurities, and opening and disassembling.
23.08	Distinguish correct reprocessing policies related to single-use, limited-use, and reusable items.
23.09	Describe decontamination methods for drill systems and batteries.
23.10	Describe the function of case cart washers and alternative methods of cleaning.
23.11	Describe the need for testing and monitoring all decontamination machines for proper function and cleaning agents.
23.12	Explain the importance of using correct chemicals for cleaning as it pertains to water quality, PH, filters, softeners, enzymes, and lubricants.
23.13	Describe the types, characteristics, and uses of chemicals, solutions, and gases utilized for decontamination, such as detergents, disinfectants, enzymatic, and germicides.
23.14	Demonstrate the decontamination process for canulated instruments, instruments with lumens, syringes, needles, rubber goods, and equipment.
23.15	Demonstrate flexible endoscopic leak testing, decontamination, and reprocessing.
23.16	Demonstrate decontamination and proper handling of rigid scopes.
23.17	Describe the methods of high-level disinfection, including manual processing, STERRAD processing, Medavador, and Automated Endoscopic Reprocessor (AER), that may be found in the endoscopy department.
23.18	Describe the types of sterilizers and methods of sterilization.
23.19	Describe the primary objectives in selecting the correct packaging materials for both the individual item and the sterilization method to be used.
23.20	Describe the principles of packaging.
23.21	Describe the characteristics of packaging materials in relation to sterilization methods.
23.22	Describe the principles of linen pack and tray construction/assembly.
23.23	Describe the recommended labeling methodologies.
23.24	Identify surgical procedure trays, instruments, supplies, and accessories.
23.25	Explain the principles utilized when loading different kinds of wrapped packs or packages into a sterilizer to ensure sterilization.
23.26	Recognize equipment malfunction and list corrective actions.
23.27	Demonstrate the wrapping of procedures trays, instruments, and other supplies.
23.28	Demonstrate loading of different kinds of wrapped packs or packages into a sterilizer to be assured of sterilant penetration.

	23.29 Describe how sterile supplies should be handled.
	23.30 Demonstrate handling, transportation, and storage of clean, sterile, and nonsterile supplies, including equipment.
24.0	Demonstrate the use of sterilization process monitors, including proper utilization of appropriate chemical indicators and bacterial spore tests for all sterilizers. The student will be able to:
	24.01 Describe the types of sterilization, sterilization cycles, and parameters for each.
	24.02 Describe the importance of the manufacturer's recommendations for the safe operation of each type of sterilizer.
	24.03 Describe the methods of sterilization monitoring.
	24.04 Demonstrate the process of preparing and documenting the sterilizer load contents for each sterilizer correctly according to the manufacturer's recommendations.
	24.05 Demonstrate the operation, testing, and monitoring of sterilizers according to the manufacturer's instructions for use.
	24.06 Demonstrate the ability to interpret and document monitoring devices, printouts, and charts accurately for each sterilization system utilized.
	24.07 Identify the standards for the monitoring of all sterilizers according to facility policies.
25.0	Demonstrate the ability to identify and select appropriate instrumentation or equipment that meets the needs of the surgical specialty. The student will be able to:
	25.01 Describe instrument terminology and identify the anatomy of surgical instruments (jaws, shanks, box locks, rings, etc.).
	25.02 Describe the types and functions of instruments.
	25.03 Describe the types of instrument construction and composition.
	25.04 Demonstrate appropriate techniques for inspection and testing of instruments.
	25.05 Identify instrumentation and equipment by name and usage.
	25.06 Correctly label instrumentation and equipment.
	25.07 Demonstrate the methods of instrument identification, marking, and tracking of use.
	25.08 Demonstrate proper inspection of instrumentation prior to assembly.
	25.09 Demonstrate the assembly of various instrument sets and surgical specialty equipment.
	25.10 Demonstrate the process regarding the manufacturer's recommendations for instrument and equipment care, including handling, operation, maintenance, and troubleshooting.
Standards 26-33 are necessary for those completing the Endoscopic Technician Specialization Track.	

26.0	Demonstrate endoscopic technician skills. The student will be able to:
26.01	Apply the principles of medical and sterile asepsis to the processing and use of instruments, equipment, and supplies.
26.02	Apply infection control techniques following the Centers for Disease Control (CDC) guidelines.
26.03	Inspect equipment and supplies for condition and quality.
26.04	Identify principles and demonstrate techniques of achieving disinfection and sterilization.
26.05	Decontaminate instruments, equipment, and environment.
26.06	Demonstrate the ability to identify, correct, and report on sterile packaging integrity.
26.07	Restock supplies and equipment.
26.08	Identify instruments, equipment, and supplies for endoscopic procedures.
26.09	Demonstrate the ability to label and package materials as required.
26.10	Demonstrate supply storage methods for instruments and equipment.
27.0	Demonstrate competencies in the components of the endoscopic technician related to communication and interpersonal skills. The student will be able to:
27.01	Use various forms of communication in the role of an endoscopic technician to communicate relevant, accurate, and complete information in a concise and clear manner.
27.02	Collaborate with the patient, physician, and other members of the healthcare team to assess, plan, implement, and evaluate the patient's endoscopy care to promote positive outcomes.
27.03	Demonstrate proper use of communication technology, including, but not limited to, intercoms, computers, written documentation logs, and paging systems.
27.04	Demonstrate patient interviewing techniques.
27.05	Facilitate teamwork as a patient advocate and assistant to the physician.
27.06	Demonstrate competency regarding reporting and documentation responsibilities.
28.0	Demonstrate an understanding of the basic sciences related to endoscopy. The student will be able to:
28.01	Apply knowledge of the microbial environment to the care of the patient.
28.02	Relate anatomy, physiology, and pathophysiology to endoscopic procedures.
28.03	Apply the principles of medical and surgical asepsis to endoscopic procedures being performed.

	28.04 Discuss electricity, computers, and robotics as they relate to endoscopic procedures.
29.0	Describe and practice safety measures in the endoscopic environment. The student will be able to:
	29.01 Inspect equipment and supplies for condition and quality.
	29.02 Implement appropriate patient safety goals in compliance with hospital policy.
	29.03 Apply knowledge of endoscopic hazards for patient safety.
30.0	Perform patient care endoscopic procedures related to the endoscopic environment and describe methods for meeting patients' needs. The student will be able to:
	30.01 Perform safe patient transfer and transportation techniques used within the endoscopy unit.
	30.02 Apply the principles of safe usage of the electrosurgical unit, laser, endoscopes, and other equipment.
	30.03 Identify the roles of the endoscopic team members during each phase of the endoscopic procedure.
	30.04 Describe the principles of positioning, draping the patient, passing instruments, monitoring the field, and manipulating the scope.
	30.05 Describe the perioperative techniques, methods, and management of anesthesia related to the type of endoscopy procedure.
	30.06 Apply knowledge of endoscopic techniques, such as assisting with proper specimen handling methods.
31.0	Demonstrate knowledge of the basic endoscopy skills necessary to function safely and effectively. The student will be able to:
	31.01 Demonstrate an understanding of the gastrointestinal system, respiratory system, and stages of disease.
	31.02 Select instruments, equipment, and supplies for endoscopic procedures using physician preference/procedure cards.
	31.03 Demonstrate the ability to prepare and/or update physician preference cards.
	31.04 Differentiate appropriate use of sterile technique regarding the donning of sterile gloves and the use of instruments, supplies, and equipment.
32.0	Demonstrate competencies in the components of the endoscopic technician related to knowledge and skills. The student will be able to:
	32.01 Prioritize patient care in any given circumstance to expedite the procedure.
	32.02 Describe preoperative diagnosis and complications related to the specific endoscopic procedures.
	32.03 Describe and apply patient diagnostic and monitoring devices as applicable to the endoscopy specialty.
	32.04 Assist the surgical team with preoperative preparation of the patient to facilitate proper patient care, including, but not limited to, positioning, draping, and setup preparation.

	32.05 Identify anatomical structures correctly during endoscopy procedures.
	32.06 Demonstrate appropriate tissue handling techniques, including the care of the endoscopic specimens.
	32.07 Describe the appropriate sequence for endoscopic procedures.
	32.08 Utilize appropriate techniques to assist with facilitating visualization.
	32.09 Demonstrate appropriate safe endoscopic techniques when the case involves either thermal, radiological, laparoscopic, environmental, or other known endoscopy hazards.
	32.10 Demonstrate competence of the appropriate usage of endoscopic instruments, equipment, and supplies.
	32.11 Assist the surgical team with postoperative care of the patient.
	32.12 Demonstrate appropriate response to emergency situations, including respiratory/cardiac arrest situations, sudden hypoxia, hemorrhage, shock, endoscopy misadventures, contamination, perforation of viscus or cavity, critical equipment failure, and injury.
33.0	Demonstrate competencies in the components of the endoscopic technician related to legal and ethical responsibilities. The student will be able to:
	33.01 State methods, standards, and aids that assist an endoscopic technician with interpreting and following legal responsibilities.
	33.02 Explain the job requirements of an endoscopic technician.
	33.03 Demonstrate an understanding of the legal, ethical, moral, and professional responsibilities of working as an endoscopic technician and the professional skills necessary to fulfill the role.
	33.04 Provide health care within the ethical/legal framework of the endoscopic technician's job description, including role responsibilities and limitations.
Standards 35-43 are necessary for those completing the Surgical Technician Specialization Track.	
35.0	Demonstrate sterile processing skills. The student will be able to:
	35.01 Apply the principles of medical/surgical asepsis, including attire, environmental control, and traffic patterns, to control and manage dirty, clean, and sterile areas of the operating room and sterile processing.
	35.02 Apply infection control techniques following the Centers for Disease Control (CDC) guidelines.
	35.03 Inspect and send out for repair instruments, equipment, and supplies regarding condition and quality.
	35.04 Describe the methods of disinfection and sterilization.
	35.05 Demonstrate the handling, inspection, and notification process regarding package integrity.
	35.06 Demonstrate correctly decontamination techniques for instruments, equipment, and the environment used for surgical procedures.
	35.07 Describe clean and sterile transportation, restocking, and storage principles for instruments, supplies, and equipment.

	35.08 Identify instruments, supplies, and equipment used for surgical procedures.
	35.09 Demonstrate the ability to prepare and label items for high-level disinfection and sterilization correctly.
	35.10 Demonstrate the techniques of high-level disinfection and sterilization for surgical instruments.
	35.11 Demonstrate case cart preparation and management.
36.0	Use communication and interpersonal skills related to surgical technology. The student will be able to:
	36.01 Describe various forms of communication within the role of a surgical technologist.
	36.02 Discuss the goals of effective communication.
	36.03 Demonstrate appropriate body language and non-verbal communication in the surgical environment.
	36.04 Analyze and select the appropriate behavioral response to meet the patient's individual needs.
	36.05 Identify the concepts of conflict resolution, assertive behavior, and the principles of teamwork in the surgical environment.
	36.06 Advocate for patients to ensure that they are included in the healthcare decision-making processes.
37.0	Demonstrate an understanding of the basic sciences related to surgical technology. The student will be able to:
	37.01 Identify prefixes, roots, and suffixes for medical terms used by surgical technologists.
	37.02 Pronounce and write medical terms correctly, along with identifying abbreviations.
	37.03 Identify the basic organizational structures of the human body, including body planes, regions, quadrants, and terms of reference.
	37.04 Analyze the basic structure of cells and relate cellular components to integrated cell function.
	37.05 Analyze the types of tissue that make up organs and the characteristics of each.
	37.06 Describe the relationship between organs and systems in the body.
	37.07 Analyze the different body systems for composition and function.
	37.08 Correlate the impact of microbiology on the practice of sterile technique and infection control in the operative setting.
	37.09 Compare and contrast the structure and characteristics of microorganisms found in the surgical environment.
	37.10 Relate medical terminology, medical abbreviations, and anatomy and physiology to surgical specialties and specific procedures.
	37.11 Analyze the various immune responses that occur in the body as defenses against invasion by pathogens.

	37.12 Identify the infectious process in surgical practice.
	37.13 Demonstrate infection and disease transmission control techniques following the Centers for Disease Control (CDC) and Occupational Safety and Health Administration (OSHA) guidelines for surgery.
	37.14 Identify wound classifications and wound healing principles within wound management guidelines.
	37.15 Discuss the principles of information technology, electricity, and robotics as they relate to surgery.
	37.16 Relate pathophysiology to surgical interventions.
	37.17 Examine hemodynamic disorders, inflammation, and infection.
38.0	Demonstrate knowledge of anesthesia, pharmacology, and math calculation principles related to the surgical environment. The student will be able to:
	38.01 Describe the roles of the anesthesia provider and circulating nurse.
	38.02 Analyze the principles of anesthesia administration and explain the necessity of each component of anesthesia preparation for the surgical patient.
	38.03 Compare and contrast methods, agents, and techniques of anesthesia administration and preparation.
	38.04 Examine anesthesia monitoring devices with patient homeostasis.
	38.05 Describe potential anesthesia and operative complications and interventions for each.
	38.06 Define the terminology and describe the basic concepts of pharmacology, including pharmacokinetics and pharmacodynamics.
	38.07 Identify the classifications, actions, effects, and precautions for common drugs used at the sterile field and within the surgical environment.
	38.08 Demonstrate the application of the six rights of medication administration (right patient, right medication, right dosage, right route, right time/frequency, and right documentation).
	38.09 Analyze and assemble correctly all medication supplies to be used with drugs on the sterile field.
	38.10 Demonstrate the appropriate methods of transferring and accepting medications onto the sterile field.
	38.11 Prepare, manage, and label sterile solutions and medications accurately within the sterile field.
	38.12 Correctly calculate common medication conversions and dosages.
	38.13 Demonstrate preparation and passing of medication mixtures using ratios and proportions correctly.
	38.14 Maintain an accurate account of the amount of each medication and/or solution used and notify the Registered Nurse (RN) to ensure accurate documentation.
39.0	Describe and demonstrate safety measures in the surgical environment. The student will be able to:

	39.01 Describe the role, job duties, and responsibilities of the surgical technologist in the surgical setting.
	39.02 Inspect equipment and supplies for condition and quality.
	39.03 Demonstrate appropriate safety measures to prevent operating room fires and electrical shock from equipment.
	39.04 Describe appropriate safety measures for laser and electrosurgical unit usage in surgery.
	39.05 Describe appropriate regulatory and accreditation agency patient safety guidelines.
	39.06 Describe the role of the surgical technologist in a disaster situation.
	39.07 Describe the role of the surgical technologist in an emergency patient situation.
	39.08 Assist with the preparation of the operative site.
40.0	Assist the Registered Nurse (RN) with patient care procedures related to the surgical environment and describe methods for meeting patients' needs. The student will be able to:
	40.01 Demonstrate patient transfer/transportation techniques used in the operating room (OR).
	40.02 Demonstrate the ability to monitor OR traffic and ensure that the sterility of the room is kept secure.
	40.03 Assist with positioning and apply safety devices correctly to the patient for surgery.
	40.04 Describe the function, assembly, application, and care of critical specialty equipment utilized.
	40.05 Identify anesthesia monitoring devices, patient complications, and interventions for maintaining patient homeostasis.
	40.06 Demonstrate correctly the connection and operation of essential equipment for the surgical procedure.
	40.07 Perform steps for Foley catheter insertion and connecting to drainage correctly.
	40.08 Demonstrate applicable wound management principles, including the placement and security of catheters, wound drainage systems, sterile dressings, and splint applications.
	40.09 Discuss relevant and unique factors regarding postoperative care specific to the procedure.
41.0	Demonstrate knowledge of the skills necessary for perioperative case management. The student will be able to:
	41.01 Identify the types of surgical attire, accessory attire, and the roles of each.
	41.02 Demonstrate the principles associated with donning or doffing surgical attire.
	41.03 Describe the principles associated with establishing the sterile field.

41.04	Select and verify required instrumentation, equipment, and supplies, including any implants needed for specific surgical procedures, using knowledge and the applicable surgeon preference/procedure cards.
41.05	Demonstrate and explain the sequence of opening sterile supplies.
41.06	Explain the steps for organizing a back table.
41.07	Explain the steps for organizing a mayo stand.
41.08	Describe the final steps required to finish establishing the sterile field.
41.09	Analyze special circumstances that require adjusting the normal routine for establishing the sterile field.
41.10	Demonstrate the surgical scrub and donning of a sterile gown and gloves.
41.11	Recognize the application of sterile technique principles, including the appropriate corrective action for common breaks in sterile technique.
41.12	Demonstrate proper draping of tables, solution stands, mayo stand, patient, and equipment.
41.13	Demonstrate the setup and management of the sterile mayo stand and/or instrument table(s).
41.14	Select suture and needle appropriately for each scenario given based on function and type.
41.15	Prepare, pass, and monitor sharps, sutures, ligatures, ties, and staples.
41.16	Demonstrate assisting gowning and gloving of other sterile team members.
41.17	Participate in the surgical time out to prevent wrong-site surgery and delays in the surgical procedure.
41.18	Prepare and pass instruments, equipment, tissue replacement materials, implants, and supplies appropriately.
41.19	Observe the surgical site regarding counted items, stage of surgery, tissue appearance, and patient’s body fluids.
41.20	Demonstrate correctly the initiation and completion of counts regarding sponges, sharps, instruments, and miscellaneous countable items.
41.21	Demonstrate ability to maintain retraction, cut suture, and hold instruments in the second scrub role as directed by the surgeon.
41.22	Demonstrate ability to prepare, validate, handle, and preserve specimens on and off the sterile field accurately for laboratory analysis.
42.0	Demonstrate knowledge of and assist with surgical procedures. The student will be able to:
42.01	Identify the preoperative diagnosis, diagnostic interventions, complications, and operative pathophysiology relative to surgical procedures.
42.02	Describe the types of incisions, methods of wound closure, and mechanisms of wound management care.

	42.03 Describe the usual sequence of surgical procedures.
	42.04 Select the appropriate instrument, equipment, or supply for each step of the procedure.
	42.05 Demonstrate effective perioperative case management, ensuring cost control and time/motion economic methods are utilized to maximize the efficiency of the OR team.
43.0	Demonstrate an understanding of legal and ethical responsibilities specific to surgical technology. The student will be able to:
	43.01 State methods, standards, and aids that assist a surgical technologist with interpreting and following legal responsibilities.
	43.02 Understand the influence of ethics in professional practice.
	43.03 Explain the role of morality during ethical decision-making.
	43.04 Provide evidence of ethical situations and problems in the healthcare profession.
	43.05 Describe the principles of problem solving and confidentiality in ethical decision-making.
	43.06 Discuss and demonstrate the key elements related to developing a surgical conscience.
	43.07 Analyze the concepts of legal and ethical responsibilities.
	43.08 Define the various types of legal doctrines.
	43.09 Discuss the standards of conduct.
	43.10 Analyze the legal elements of proper documentation.
	43.11 Describe the types of sentinel events.
	43.12 Describe the importance of risk management.

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools, and equipment, as well as experimental, quality, and safety procedures, are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate, and troubleshoot equipment/tools used to make observations. Students understand measurement error and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

The Human Patient Simulator (HPS) or other accepted simulation scenarios may be used for a limited number of clinical hours. A low teacher-student ratio in the lab and clinical area is strongly recommended. The recommended maximum ratio is 1:8.

Special Notes

Specialization Track Descriptions:

Specialization Track: **Sterile Processing Technician**
Specialization Length: **30 credit hours**
Specialization Concepts and Content: The purpose of this track is to prepare students for initial employment with an occupational title as a Sterile Processing Technician in various specialized areas, or to provide supplemental training for persons previously or currently employed in these occupations.

Specialization Track: **Endoscopic Technician**
Specialization Length: **24 credit hours**
Specialization Concepts and Content: The purpose of this track is to prepare students for initial employment with an occupational title as Endoscopic or Gastrointestinal Lab (GI Lab) Technician in various specialized areas, or to provide supplemental training for persons previously or currently employed in these occupations.

Specialization Track: **Surgical Technician**
Specialization Length: **49 credit hours**
Specialization Concepts and Content: The purpose of this track is to prepare students for initial employment with an occupational title as a Surgical Technologist in various specialized areas, or to provide supplemental training for persons previously or currently employed in these occupations.

This program meets the Department of Health's education requirements for HIV/AIDS, Domestic Violence, and Prevention of Medical Errors. Although not a requirement for initial licensure, it is a requirement for renewal, therefore, the instructor **may** provide a certificate for renewal purposes to the student verifying these requirements have been met.

If students in this program are seeking a licensure, certificate, or registration through the Department of Health, please refer to 456.0635, F.S., for more information on disqualification for a license, certificate, or registration through the Department of Health.

The Specialization Core Curriculum should be taught by qualified staff as outlined in the most recent approved Commission on Accreditation on Allied Health Education programs (CAAHEP) or other nationally recognized accreditation standards and guidelines for that specialization.

Entering students who have successfully completed the program 0317.021100, Surgical Technology, or currently Nationally Certified as a CST (Certified Surgical Technologist), should be given appropriate advanced standing.

After successful completion of an accredited program, students are eligible to take the national certification examination as applicable to the specialization.

The CORE should be taken first in the program. Following the successful completion of the core, the student is eligible to take the National Health Care Foundation Skill Standards Assessment with instructor approval and the completion of a portfolio.

General Education Course Requirements for AS and AAS Degrees

State Board of Education Rule 6A-14.030(4), F.A.C., identifies 15 credit hours as the minimum amount of general education coursework required in the Associate of Science (AS) degree and the Associate of Applied Science (AAS) degree. In addition, Rule 6A-14.0303, F.A.C., implements s. 1007.25, F.S., and requires students entering a technical education degree program in the 2022-2023 academic year, and thereafter, to complete at least one identified core course in each subject area as part of the general education course requirements (15 credit hours total) before a degree is awarded. The core subject areas include:

- Communication.
- Humanities.
- Mathematics.
- Natural Sciences.
- Social Sciences.

Career and Technical Student Organization (CTSO)

CTSOs are co-curricular career and technical student organizations providing leadership training and reinforcing specific career and technical skills. Career and Technical Student Organizations provide activities for students as an integral part of the instruction offered. Other CTSOs not listed in this curriculum framework or recognized by the Florida Department of Education are permissible provided they support student mastery over the standards and benchmarks of this curriculum framework.

Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary

education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology, and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

Certificate Programs

A College Credit Certificate consists of a program of instruction of less than sixty (60) credits of college-level courses, which is part of an AS or AAS degree program and prepares students for entry into employment (Rule 6A-14.030, F.A.C.). This AS degree program includes the following College Credit Certificates:

Sterile Processing Technician (0351101202) – 30 Credits
Endoscopic Technician (0351099902) – 24 Credits
Surgical Technician (0351090904) – 49 Credits

Standards for the above certificate programs are contained in separate curriculum frameworks.

Florida Department of Education
Curriculum Framework

The standards and benchmarks for this program were updated for the 2026-27 academic year.

Program Title: **Diagnostic Medical Sonography Technology**
Career Cluster: **Health Science**

Associate in Science	
CIP Number	1351091004
Program Type	College Credit
Program Length	77 credit hours
CTSO	HOSA
SOC Codes (all applicable)	For program SOC codes, please see the Program and Course Tables section of the CTE Program Resources page linked below.
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml

Purpose

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Health Science career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of Health Science career cluster.

The program is designed to prepare students for employment as diagnostic medical sonographers or to provide supplemental training for persons previously or currently employed in this occupation.

The content includes but is not limited to anatomy, physiology and pathology of the abdominal, pelvic, and urogenital structures; physics; instrumentation; equipment standards; biological effect of ultrasound; patient care; clinical medicine; applications and limitations of ultrasound; related diagnostic procedures; image evaluation; administration; first aid and cardiopulmonary resuscitation; employability skills; leadership and human relations skills; health and safety.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Program Structure

This program is a planned sequence of instruction consisting of 77 credit hours.

When developing the course sequence for the local implementation of this program, select courses that:

- Meet the skill development requirements of the standards and benchmarks of this program.
- Meet the general education core course requirements of Rule 6A-14.0303, Florida Administrative Code.
- Where reasonable and practicable, align with programs offered by your institution or other postsecondary institutions in Florida, including:
    - Related CCC and ATD credentials.
    - Baccalaureate degrees within the same career pathway and/or Federal CIP code.

Visit FloridaShines' Discover Programs website to identify other institutions that offer similar programs to review their course sequencing. Where appropriate, course alignment between institutions offering related programs can facilitate interagency student articulation.

Visit FloridaShines' Common Prerequisites Manual to identify courses that are prerequisites for admission into an upper division program. When sub-baccalaureate courses are aligned to the course admissions requirements of baccalaureate programs with the same career pathway, students can enter upper division coursework seamlessly.

Florida's Career Readiness Skills for CTE Programs

Employability Skills	
01.0	Apply academic skills to workplace scenarios.
01.01	Use reading skills.
01.02	Use writing skills.
01.03	Use mathematical strategies and procedures.
01.04	Use scientific principles and procedures.
02.0	Design a solution to an industry problem.
02.01	Use critical thinking.
02.02	Use creativity.
02.03	Make sound decisions.
02.04	Solve problems.
02.05	Reason.
02.06	Plan and organize.
03.0	Manage resources within an industry project
03.01	Manage time.
03.02	Manage money or resources.
03.03	Manage materials.
03.04	Manage personnel.
04.0	Oversee the subcomponents, operations and output of a technical or organizational system.
04.01	Manage systems.
04.02	Monitor systems.
04.03	Improve systems.
05.0	Use information for decision making.
05.01	Locate information.
05.02	Organize information.
05.03	Use information.

	05.04 Analyze information.
	05.05 Communicate information.
06.0	Apply relevant technology to workplace scenarios to aid productivity.
	06.01 Use technology.
07.0	Interpret and express interpersonal communication.
	07.01 Communicate verbally.
	07.02 Listen actively.
	07.03 Comprehend written material.
	07.04 Convey information in writing.
	07.05 Communicate nonverbally.
	07.06 Interpret nonverbal communication.
08.0	Interact with others to accomplish workplace goals.
	08.01 Collaborate with others in a team.
	08.02 Respond to customer needs.
	08.03 Exercise leadership.
	08.04 Negotiate to resolve conflict.
	08.05 Respect others.
09.0	Manage personal behavior to maximize productivity and professional growth.
	09.01 Demonstrate responsibility and self-discipline.
	09.02 Adapt and show flexibility.
	09.03 Work independently.
	09.04 Demonstrate a willingness to learn.
	09.05 Demonstrate integrity.
	09.06 Demonstrate professionalism.
	09.07 Take initiative.
	09.08 Display positive attitude.
	09.09 Take responsibility for professional growth.

Job Attainment	
10.0	Find, assess and apply to job opportunities.
10.01	Identify online job posts relevant to his or her career aspirations.
10.02	Compare and contrast the job posts' required qualifications, job duties, compensation, benefits and employers.
10.03	Define what information, documentation and writing prompts are required for the positions.
11.0	Communicate personal competence, character and fit for a job opportunity.
11.01	Develop a resume.
11.02	Write a cover letter.
11.03	Curate a professional portfolio that includes work products.
11.04	Prepare for and experience a mock job interview.
12.0	Cultivate and leverage relationships to professionally advance.
12.01	Request a signed reference letter, letter of recommendation and/or an online skill/professionalism endorsement.
12.02	Develop a plan to cultivate a professional digital footprint.
12.03	Develop a networking plan for a specific industry of interest.

Standards

After successfully completing this program, the student will be able to perform the following:

01.0 Demonstrate knowledge of the health care delivery system and health occupations.
02.0 Demonstrate the ability to communicate and use interpersonal skills effectively.
03.0 Demonstrate legal and ethical responsibilities.
04.0 Demonstrate an understanding of and apply wellness and disease concepts.
05.0 Recognize and practice safety and security procedures.
06.0 Recognize and respond to emergency situations.
07.0 Recognize and practice infection control procedures.
08.0 Demonstrate an understanding of information technology applications in healthcare.
09.0 Demonstrate employability skills.
10.0 Demonstrate knowledge of blood-borne diseases, including HIV/AIDS.
11.0 Apply basic math and science skills.
12.0 Demonstrate an understanding of the role and responsibilities of the sonographer regarding ultrasound imaging and patient care.
13.0 Demonstrate an awareness of the basic principles of ultrasound physics, emphasizing practical relationships of physics to optimizing images for more accurate diagnosis.
14.0 Demonstrate knowledge of the basic principles and instrumentation specific to the field of ultrasound.
15.0 Demonstrate knowledge of the principles of Doppler.
16.0 Apply knowledge as it pertains to various ultrasound systems in the clinical setting.
17.0 Apply knowledge of the anatomy, pathology, and scanning techniques related to retroperitoneal structures, abdominal organs, cavities, and urinary tract.
18.0 Apply knowledge of the anatomy, pathology, and scanning techniques related to abdominal Doppler studies.
19.0 Apply knowledge of anatomy, pathology, and scanning techniques to superficial structures.
20.0 Apply knowledge of anatomy, pathology, and scanning techniques used in sonography of the female pelvis.
21.0 Apply knowledge of anatomy, pathology, and scanning techniques related to obstetrics.
22.0 Develop a continuous awareness of the disease processes.
23.0 Apply accumulated knowledge to the process of creating and documenting diagnostic sonograms.
24.0 Apply skills needed to effectively perform in the role of an entry-level sonographer.

Florida Department of Education
Student Performance Standards

Program Title: **Diagnostic Medical Sonography Technology**
CIP Number: **1351091004**
Program Length: **77 credit hours**

Standards 1-11 are referred to as the **Health Science Core** and are required standards in this program. Secondary and Postsecondary students completing the health science core will not have to repeat the core in any other health science program in which it is a part. When the recommended sequence is followed, the structure allows students to complete at specified points for employment or remain for advanced training or cross-training.

To ensure consistency whenever these courses are offered, the health science core standards (1-11) and benchmarks have been placed in a separate document. To access this document, visit this link:
https://www.fldoe.org/core/fileparse.php/20569/urlt/health-sci-core-psav-cc-2324.rtf

At the completion of this program, the student will be able to:	
12.0	Demonstrate an understanding of the role and responsibilities of the sonographer regarding ultrasound imaging and patient care. The student will be able to:
12.01	Explain the role of the sonographer.
12.02	Describe the relationship of ultrasound to other imaging modalities.
12.03	Describe and demonstrate the proper uses of orientation and standard labeling of ultrasound images.
12.04	Explain the basic concepts of ultrasound equipment available and demonstrate safety in their use and basic techniques of scanning.
12.05	Explain and demonstrate the criteria for image evaluation, specifically special sonographic parameters.
12.06	Demonstrate knowledge of scanning with safe exposure levels related to biological effects and the ALARA (as low as reasonably achievable) principle.
12.07	Demonstrate and describe proper body mechanics to avoid work-related musculoskeletal disorders when performing sonographic examinations.
12.08	Describe special problems encountered and methods related to medical ethics and law in sonography.
12.09	Describe the organizational structure common to most hospitals with emphasis placed on the role of the ultrasound department.
12.10	Describe the relationship of the sonographer to the patients and their individual needs.
12.11	Demonstrate professional communication skills required in the healthcare setting.

	12.12 Explain and demonstrate the methods of patient preparation and care before and during a sonogram.
	12.13 Demonstrate proper body mechanics when transporting or assisting patients with and without support equipment.
	12.14 Discuss current trends in sonographic technology and techniques.
	12.15 Demonstrate knowledge of medical and sonographic terminology.
	12.16 Demonstrate proper universal precautions and sterile techniques when preparing for a sonographic procedure.
13.0	Demonstrate an awareness of the basic principles of ultrasound physics, emphasizing practical relationships of physics to optimizing images for more accurate diagnosis. The student will be able to:
	13.01 Explain what sound is and its characteristics.
	13.02 Compare the difference between pulsed and continuous wave ultrasound.
	13.03 Explain amplitude and intensity of sound as they apply to sonography.
	13.04 Describe the causes and effects of attenuation and acoustic impedance on ultrasound.
	13.05 Identify the causes and effects of transmission, reflection, refraction, and scattering of ultrasound.
	13.06 Explain the Doppler effect as it relates to ultrasound.
	13.07 Describe the factors of attenuation versus depth penetration of ultrasound in human tissue.
	13.08 Identify resolution and controlling factors of resolution as applied to sonography.
	13.09 Discuss and demonstrate the basic principles governing sound and sound interaction in various types of tissue.
	13.10 Relate mathematical formulas to the interaction of sound with various media.
	13.11 Describe resolution and its effect on the final image.
	13.12 Describe and demonstrate the factors that control and determine axial, elevational, and lateral resolution.
14.0	Demonstrate knowledge of the basic principles and instrumentation specific to the field of ultrasound. The student will be able to:
	14.01 Describe piezoelectric effects.
	14.02 Describe transducer construction.
	14.03 Discuss historical perspectives related to the development of the ultrasound system.
	14.04 Explain and describe how signal processing affects image production and presentations.

	14.05 Discuss basic system operation in the form of block diagrams for real-time and Doppler image production.
	14.06 Describe and demonstrate the purpose and use of typical controls located on ultrasound systems.
	14.07 Identify methods of determining and assuring quality control both sonographically and photographically.
	14.08 Discuss and demonstrate common processing techniques, including but not limited to harmonics, persistence, spatial compounding, panoramic imaging, and zoom.
	14.09 Discuss causes, detection, and control of factors that may create biologic effects in human tissue during insonation at the diagnostic medical sonography exposure level.
15.0	Demonstrate knowledge of the principles of Doppler. The student will be able to:
	15.01 Explain the general principles of Doppler techniques and the Doppler formula.
	15.02 Describe how pulse wave Doppler is processed and displayed.
	15.03 Describe how color-flow Doppler is processed and displayed.
	15.04 Describe how power Doppler is processed and displayed.
	15.05 Identify normal and abnormal Doppler waveforms.
	15.06 Discuss the advantages and disadvantages of the various Doppler methods.
	15.07 Describe the purpose and use of typical controls used to optimize Doppler acquisition and display, including Doppler measurements.
	15.08 Demonstrate skills required in the typical Sonography setting for obtaining and displaying Doppler.
16.0	Apply knowledge as it pertains to various ultrasound systems in the clinical setting. The student will be able to:
	16.01 Recall patient exam information for sonographic use on various ultrasound units.
	16.02 Demonstrate appropriate transducer selection for specific sonographic application.
	16.03 Utilize amplification in all its forms to produce a diagnostic quality sonogram.
	16.04 Utilize power to produce a diagnostic quality sonogram while maintaining the ALARA principle.
	16.05 Utilize the various forms of processing to produce a diagnostic quality sonogram.
	16.06 Utilize the various types of scanning modes, imaging techniques, and patient positioning required to produce diagnostic quality sonograms.
	16.07 Recognize and explain typical artifacts as found in sonographic imaging.

	16.08 Explain the usage of various image storage devices.
	16.09 Explain quality assurance parameters utilizing test objects and phantoms.
17.0	Apply knowledge of the anatomy, pathology, and scanning techniques related to retroperitoneal structures, abdominal organs, cavities, and urinary tract. The student will be able to:
	17.01 Identify the gross anatomy, relational anatomy, and anatomic variants sonographically of the aorta, inferior vena cava, pancreas, liver, gallbladder, spleen, adrenal glands, urinary tract, peritoneal and retroperitoneal cavities, stomach, bowel, and lymph nodes.
	17.02 Label the gross upper abdominal organs and cavities in two planes.
	17.03 Label the gross retroperitoneal structures and urinary tract in two planes.
	17.04 Explain screen orientation and its relationship to the upper abdomen and retroperitoneal structures.
	17.05 Explain the physiology of the upper abdominal organs and the related laboratory results.
	17.06 Explain the physiology and related laboratory results of the retroperitoneal organs, urinary tract, bowel, and peritoneum.
	17.07 Demonstrate and explain the protocols for sonographic examination of the upper abdominal organs.
	17.08 Demonstrate and explain the protocols for sonographic examination of the retroperitoneal organs, urinary tract, bowel, and peritoneum.
	17.09 Explain the common pathologies related to the upper abdomen, including the sonographic appearance of these pathologies, corresponding lab values, patient history, and symptoms.
	17.10 Explain the common pathologies related to the retroperitoneal organs, urinary tract, bowel, and peritoneum, including the sonographic appearance of these pathologies and corresponding lab values, patient history, and symptoms.
	17.11 Identify the need for protocol modification based on the sonographic findings and the differential diagnoses.
	17.12 Describe and perform procedures of a complete ultrasound examination of the upper abdomen from preparation to reporting.
	17.13 Describe and perform procedures of a complete ultrasound examination of the bowel, lymph nodes, urinary tract, retroperitoneum, and peritoneal cavity from preparation to reporting.
18.0	Apply knowledge of the anatomy, pathology, and scanning techniques related to abdominal Doppler studies. The student will be able to:
	18.01 Explain the hemodynamics of blood flow.
	18.02 Identify the gross anatomy, relational anatomy, and anatomic variants sonographically of the mesenteric branches, hepatic portal system, as well as native and transplant renal vasculature.
	18.03 Label the vasculature in two planes.
	18.04 Demonstrate and explain the protocol for sonographic examination of the mesenteric branches.

	18.05	Demonstrate and explain the protocol for sonographic examination of the hepatic portal system.
	18.06	Demonstrate and explain the protocol for sonographic examinations of the native and transplant renal vasculature.
	18.07	Explain the common pathologies related to the abdominal vasculature including the sonographic appearance and Doppler patterns of these pathologies, and corresponding lab values, patient history, and symptoms.
	18.08	Identify the need for protocol modification based on the sonographic findings, Doppler patterns, and the differential diagnoses.
	18.09	Describe and perform procedures of a complete ultrasound examination of each of the abdominal Doppler studies from preparation to reporting.
19.0	Apply knowledge of anatomy, pathology, and scanning techniques to superficial structures. The student will be able to:	
	19.01	Identify the gross anatomy, relational anatomy, and anatomic variants of superficial structures as demonstrated by ultrasound including but not limited to: neck, thyroid, abdominal wall, scrotum (testicular), penis, and prostate.
	19.02	Label superficial structures in two planes.
	19.03	Explain the physiology and related laboratory results of the superficial structures.
	19.04	Demonstrate and explain the protocols for sonographic examination of superficial structures.
	19.05	Explain the common pathologies related to superficial structures, including the sonographic appearance of these pathologies, corresponding lab values, patient history, and symptoms.
	19.06	Identify the need for protocol modification based on the sonographic findings and the differential diagnoses.
	19.07	Describe and perform procedures of a complete ultrasound examination of each of the superficial structures from preparation to reporting.
20.0	Apply knowledge of anatomy, pathology, and scanning techniques used in sonography of the female pelvis. The student will be able to:	
	20.01	Identify the gross female pelvic structures as demonstrated by ultrasound, including but not limited to the female reproductive organs and urinary bladder.
	20.02	Label the gross female pelvic organs in two planes.
	20.03	Explain screen orientation and its relationship to the female pelvic structures.
	20.04	Explain the physiology of the female pelvic organs and the related laboratory results.
	20.05	Demonstrate and explain the protocol for sonographic examination of the female pelvic organs.
	20.06	Explain the common pathologies related to the female pelvis, including the sonographic appearance of these pathologies, corresponding lab values, patient history, and symptoms.
	20.07	Describe and perform procedures of a complete ultrasound examination of the female pelvis from preparation to reporting.

20.08	Discuss when the transabdominal, transvaginal, or translabial pelvic ultrasound approach should be utilized.
20.09	Identify the need for protocol modification based on the sonographic findings and the differential diagnoses.
21.0	Apply knowledge of anatomy, pathology, and scanning techniques related to obstetrics. The student will be able to:
21.01	Identify gross obstetrical structures as demonstrated by ultrasound, including but not limited to the uterus and adnexa in both the pregnant and postpartum state.
21.02	Discuss anatomy and physiology of the various stages of fetal development as related to ultrasound.
21.03	Discuss the anatomy and physiology of the placenta at all stages of development.
21.04	Describe the basic stages of embryology and sonographic relationships.
21.05	Describe events occurring in the first trimester and their relationship to ultrasound.
21.06	Explain the physiology of organs related to obstetrics.
21.07	Demonstrate and explain the protocol for sonographic examinations used in obstetrics.
21.08	Discuss protocol modification in the setting of multiple gestations through the various stages of fetal development.
21.09	Explain the common pathologies related to obstetrics, including the sonographic appearance of these pathologies, corresponding lab values, patient history, and symptoms.
21.10	Explain screen orientation and its relationship to the organs related to obstetrics.
21.11	Describe and perform methods for determining gestational age and fetal growth by ultrasound using appropriate biometrics.
21.12	Explain the effects of specific diseases common to the gestational period.
21.13	Compare the normal and abnormal states of embryology in humans as demonstrated by ultrasound.
21.14	Perform a biophysical profile to determine fetal well-being.
21.15	Compare the normal and pathologic appearance of the fetus and the fetal environment.
21.16	Demonstrate special techniques of ultrasound scanning and collateral processes during pregnancy.
21.17	Explain and perform the current AIUM protocols under the obstetrical ultrasound guidelines.
21.18	Demonstrate and explain the special safety precautions required during an obstetrical ultrasound with a focus on AIUM guidelines.
21.19	Describe and perform procedures of a complete obstetrical ultrasound examination from preparation to reporting.

	21.20 Describe Doppler applications for evaluation of a pregnancy (i.e., umbilical artery, etc.).
22.0	Develop a continuous awareness of the disease processes. The student will be able to:
	22.01 Discuss basic concepts of the causes of disease.
	22.02 Discuss common urogenital pathology.
	22.03 Discuss gastrointestinal diseases.
	22.04 Discuss common pathology found in obstetrics and gynecology.
	22.05 Discuss common pathology found in the cardiovascular system.
	22.06 Discuss common pathology found in the hepatobiliary system to include the liver, gallbladder, pancreas, spleen, and retroperitoneum.
	22.07 Discuss common pathology found in thyroid, scrotum (testicular), neck, penis, and prostate.
	22.08 Discuss post-surgical changes and their effects on images.
	22.09 Discuss the usage of contrast-enhanced imaging and how it aids in diagnosing disease processes.
	22.10 Discuss the usage of elastography and how it aids in diagnosing disease processes.
23.0	Apply accumulated knowledge to the process of creating and documenting diagnostic sonograms. The student will be able to:
	23.01 Complete in all aspects a diagnostic sonogram with emphasis on: • ergonomic techniques • standard precautions/isolation procedures • patient identification • patient interaction • professionalism • creation of an optimized sonogram • appropriate image annotation • safety • recognition of anatomy, both normal and pathologic.
	23.02 Complete routine documentation associated with a typical ultrasound department.
	23.03 Accurately complete technical report/worksheet.
24.0	Apply skills needed to effectively perform in the role of an entry-level sonographer. The student will be able to:
	24.01 Demonstrate clinical competency through complete and diagnostic sonographic examinations of the abdomen, superficial

	structures, retroperitoneal cavity, pelvis, and obstetrical patient using real-time and Doppler techniques using a variety of ultrasound machines.
24.02	Demonstrate knowledge and understanding of the role of an entry-level sonographer while performing interventional/invasive procedures.
24.03	Present completed examinations in detail with justification of all techniques, methods, and procedures used to obtain data.
24.04	Identify and present examination findings that require immediate clinical responses and notify the interpreting physician.
24.05	Identify gross pathology of the abdomen, superficial structures, retroperitoneal cavity, pelvis, and obstetrical patient, both on sonograms and related imaging modalities.
24.06	Perform all preliminary procedures leading to actual examination by sonography and all procedures necessary post examination, to include but not limited to prior exams.
24.07	Explain the reporting and documentation process of clinical incidents and/or adverse reactions that occur.
24.08	Demonstrate skills needed to relate with tact and diplomacy with patients, physicians, nurses, other imaging personnel, and the general hospital population.
24.09	Demonstrate those characteristics that reflect the high degree of professionalism associated with the field of ultrasound.
24.10	Discuss awareness of professional development resources.

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as, experimental, quality, and safety procedures are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate and troubleshoot equipment/tools used to make observations. Students understand measurement error; and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

Special Notes

This program meets the Department of Health's education requirements for HIV/AIDS, Domestic Violence and Prevention of Medical Errors. Although not a requirement for initial licensure, it is a requirement for renewal, therefore the instructor **may** provide a certificate for renewal purposes to the student verifying these requirements have been met.

If students in this program are seeking a licensure, certificate, or registration through the Department of Health, please refer to s. 456.0635, F.S. for more information on disqualification for a license, certificate, or registration through the Department of Health. The program should meet the requirements of:

Commission on Accreditation of Allied Health Education Programs (CAAHEP) www.caahep.org
361 Park St., Clearwater, FL 33756, (727) 210-2350

Written clinical affiliation agreements must be maintained with each health care facility. Health care facilities must be accredited by The Joint Commission.

Students completing this program may apply to take one or both of the national registry examinations to obtain certification, for further information contact:

American Registry of Diagnostic, Medical Sonographers (ARDMS) www.ardms.org
51 Monroe St., Plaza East 1, Rockville, Maryland 20850-2400, (301) 738-8401

Or

American Registry of Radiologic Technologists (ARRT) www.arrt.org
1255 Northland Drive, St. Paul, MN 55120-1155, (612) 687-0048

The Core should be taken first in the program. Following the successful completion of the core, the student is eligible to take the National Health Care Foundation Skill Standards Assessment with instructor approval and the completion of a portfolio.

General Education Course Requirements for AS and AAS Degrees

State Board of Education Rule 6A-14.030(4), F.A.C., identifies 15 credit hours as the minimum amount of general education coursework required in the Associate of Science (AS) degree and the Associate of Applied Science (AAS) degree. In addition, Rule 6A-14.0303, F.A.C., implements s. 1007.25, F.S., and requires students entering a technical education degree program in the 2022-2023 academic year, and thereafter, to complete at least one identified core course in each subject area as part of the general education course requirements (15 credit hours total) before a degree is awarded). The core subject areas include:

- Communication.
- Humanities.
- Mathematics.
- Natural Sciences.
- Social Sciences.

Career and Technical Student Organization (CTSO)

CTSOs are co-curricular career and technical student organizations providing leadership training and reinforcing specific career and technical skills. Career and Technical Student Organizations provide activities for students as an integral part of the instruction offered. Other CTSOs not listed in this curriculum framework or recognized by the Florida Department of Education are permissible provided they support student mastery over the standards and benchmarks of this curriculum framework.

Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

Florida Department of Education
Curriculum Framework

The standards and benchmarks for this program were updated for the 2026-27 academic year.

Program Title: **Radiography**
Career Cluster: **Health Science**

Associate in Science	
CIP Number	1351091100
Program Type	College Credit
Program Length	77 credit hours
CTSO	HOSA
SOC Codes (all applicable)	For program SOC codes, please see the Program and Course Tables section of the CTE Program Resources page linked below.
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml

Purpose

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Health Science career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of Health Science career cluster.

The purpose of this program is to prepare students for employment as Radiographers, and Radiologic Technologists/Technicians or to provide supplemental training for persons previously or presently employed in these occupations.

The content includes but is not limited to an introduction to radiography, medical ethics, and law, medical terminology, methods of patient care, human structure and function, radiographic procedures, principles of radiographic exposure, imaging equipment, image processing, radiation physics, principles of radiation protection, principles of radiation biology, radiographic pathology, introduction to quality assurance, introduction to computer literacy, and clinical education. The curriculum includes a plan for well-structured competency-based clinical education.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Program Structure

This program is a planned sequence of instruction consisting of 77 credit hours.

When developing the course sequence for the local implementation of this program, select courses that:

- Meet the skill development requirements of the standards and benchmarks of this program.
- Meet the general education core course requirements of Rule 6A-14.0303, Florida Administrative Code.
- Where reasonable and practicable, align with programs offered by your institution or other postsecondary institutions in Florida, including:
    - Related CCC and ATD credentials.
    - Baccalaureate degrees within the same career pathway and/or Federal CIP code.

Visit FloridaShines' Discover Programs website to identify other institutions that offer similar programs to review their course sequencing. Where appropriate, course alignment between institutions offering related programs can facilitate interagency student articulation.

Visit FloridaShines' Common Prerequisites Manual to identify courses that are prerequisites for admission into an upper division program. When sub-baccalaureate courses are aligned to the course admissions requirements of baccalaureate programs with the same career pathway, students can enter upper division coursework seamlessly.

Regulated Programs

The program must be approved by the Department of Health, Bureau of Radiation Control so that the graduate is eligible for licensure in Florida as a Certified Radiologic Technologist. As specified in Chapter 468 Part IV, F.S. and Chapter 64E-3, F.A.C.

The program must be accredited. by the Joint Review Committee on Education in Radiologic Technology (JRCERT), 20 North Wacker Drive, Suite 900, Chicago, Illinois 60606-2901, (312) 704-5300, or by one of the following ARRT recognized regional accrediting agency.

Commission Higher Education of the Middle States Association of Colleges and Schools
Commission on Elementary and Secondary Schools of the Middle States Association of College and Schools
New England Association of Schools and Colleges
New England Commission of Higher Education
Higher Learning Commission
Northwest Commission on Colleges and Universities
Southern Association of Colleges and Schools Commission on Colleges
Accrediting Commission for Community and Junior Colleges and Western Association of Senior College and University Commission

Program completers will be eligible to make an application to take the National Registry examination. For further information contact:

American Registry of Radiologic Technologists (ARRT)
1255 Northland Drive, St. Paul, MN 55120-1155, (612) 687-0048

Florida's Career Readiness Skills for CTE Programs

Employability Skills	
01.0	Apply academic skills to workplace scenarios.
	01.01 Use reading skills.
	01.02 Use writing skills.
	01.03 Use mathematical strategies and procedures.
	01.04 Use scientific principles and procedures.
02.0	Design a solution to an industry problem.
	02.01 Use critical thinking.
	02.02 Use creativity.
	02.03 Make sound decisions.
	02.04 Solve problems.
	02.05 Reason.
	02.06 Plan and organize.
03.0	Manage resources within an industry project
	03.01 Manage time.
	03.02 Manage money or resources.
	03.03 Manage materials.
	03.04 Manage personnel.
04.0	Oversee the subcomponents, operations and output of a technical or organizational system.
	04.01 Manage systems.
	04.02 Monitor systems.
	04.03 Improve systems.
05.0	Use information for decision making.
	05.01 Locate information.
	05.02 Organize information.
	05.03 Use information.

	05.04 Analyze information.
	05.05 Communicate information.
06.0	Apply relevant technology to workplace scenarios to aid productivity.
	06.01 Use technology.
07.0	Interpret and express interpersonal communication.
	07.01 Communicate verbally.
	07.02 Listen actively.
	07.03 Comprehend written material.
	07.04 Convey information in writing.
	07.05 Communicate nonverbally.
	07.06 Interpret nonverbal communication.
08.0	Interact with others to accomplish workplace goals.
	08.01 Collaborate with others in a team.
	08.02 Respond to customer needs.
	08.03 Exercise leadership.
	08.04 Negotiate to resolve conflict.
	08.05 Respect others.
09.0	Manage personal behavior to maximize productivity and professional growth.
	09.01 Demonstrate responsibility and self-discipline.
	09.02 Adapt and show flexibility.
	09.03 Work independently.
	09.04 Demonstrate a willingness to learn.
	09.05 Demonstrate integrity.
	09.06 Demonstrate professionalism.
	09.07 Take initiative.
	09.08 Display positive attitude.
	09.09 Take responsibility for professional growth.

Job Attainment	
10.0	Find, assess and apply to job opportunities.
10.01	Identify online job posts relevant to his or her career aspirations.
10.02	Compare and contrast the job posts' required qualifications, job duties, compensation, benefits and employers.
10.03	Define what information, documentation and writing prompts are required for the positions.
11.0	Communicate personal competence, character and fit for a job opportunity.
11.01	Develop a resume.
11.02	Write a cover letter.
11.03	Curate a professional portfolio that includes work products.
11.04	Prepare for and experience a mock job interview.
12.0	Cultivate and leverage relationships to professionally advance.
12.01	Request a signed reference letter, letter of recommendation and/or an online skill/professionalism endorsement.
12.02	Develop a plan to cultivate a professional digital footprint.
12.03	Develop a networking plan for a specific industry of interest.

Standards

After successfully completing this program, the student will be able to perform the following:

01.0 Demonstrate a functional knowledge of medical terminology required in radiologic science.
02.0 Convey an understanding of the ethics and laws that impact radiologic sciences at both the state and federal levels.
03.0 Demonstrate introductory knowledge of radiologic science and the health care system.
04.0 Demonstrate knowledge of and perform patient care procedures required in radiologic sciences.
05.0 Demonstrate an understanding of pharmacology and venipuncture procedure as they relate to radiologic science.
06.0 Demonstrate proficiency in the skills, techniques, and knowledge required for image analysis.
07.0 Demonstrate proficiency in the skills, techniques, and knowledge required to operate imaging equipment.
08.0 Convey an understanding of the principles of imaging and the various factors that contribute to accuracy, including X-ray production, image formation, and factors related to radiographic quality.
09.0 Demonstrate an understanding of the structure and function of the human body with a focus on the muscular, endocrine, respiratory, urinary, axial, and appendicular skeletal systems.
10.0 Demonstrate proficiency in the skills, techniques, and knowledge required to perform accurate radiographic procedures.
11.0 Demonstrate proficiency in the skills and knowledge required for clinical practice.
12.0 Convey an understanding of the principles of imaging and the various factors that contribute to accuracy, including image acquisition and processing, scatter radiation control, and image evaluation.
13.0 Demonstrate an understanding of the concepts and equipment required for digital image acquisition and display.
14.0 Demonstrate an understanding of the structure and function of the human body with a focus on the circulatory/cardiovascular, digestive, and reproductive systems.
15.0 Demonstrate proficiency in the skills, techniques, and knowledge required to perform accurate fluoroscopic procedures.
16.0 Demonstrate an understanding of the structure and function of the human body with a focus on the nervous system.
17.0 Demonstrate introductory knowledge of computed tomography.
18.0 Demonstrate appropriate venipuncture technique.
19.0 Demonstrate an understanding of radiographic pathology.
20.0 Demonstrate an understanding of how radiation is produced and the characteristics of different classifications of radiation.
21.0 Demonstrate an understanding of the structure and function of the human body, including the immune system and chemical composition of the body.
22.0 Demonstrate an understanding of the integral aspects of radiation biology required of a radiographer.
23.0 Convey the importance of proper radiation protection and the precautions radiographers should take to prevent unnecessary exposure to themselves and patients.

Florida Department of Education
Student Performance Standards

Program Title: **Radiography**
CIP Number: **1351091100**
Program Length: **77 credit hours**

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At the completion of this program, the student will be able to:	
01.0	Demonstrate a functional knowledge of medical terminology required in radiologic science. The student will be able to:
01.01	Apply the word-building process for medical terminology.
01.02	Interpret medical abbreviations and symbols.
01.03	Critique orders and requests.
01.04	Define medical imaging and radiation.
01.05	Translate medical terms, abbreviations, and symbols into layman's terms.
02.0	Convey an understanding of the ethics and laws that impact radiologic sciences at both the state and federal levels. The student will be able to:
02.01	Discuss the origins of medical ethics.
02.02	Apply medical/professional ethics in the context of a broader societal ethic.
02.03	Explain the role of ethical behavior in health care delivery.
02.04	Explain concepts of personal honesty, integrity, accountability, competence, and compassion as ethical imperatives in health care.
02.05	Identify legal and professional standards and relate each to practice in health professions.
02.06	Identify specific situations and conditions that give rise to ethical dilemmas in health care.
02.07	Explain select concepts embodied in the principles of patients' rights, the doctrine of informed (patient) consent, and other issues related to patients' rights.
02.08	Explain the legal implications of professional liability, malpractice, professional negligence, and other legal doctrines applicable to professional practice.
02.09	Describe the importance of timely, accurate, and comprehensive methods of documentation as a legal and ethical imperative.

	02.10 Explore theoretical situations and questions relating to the ethics of health care delivery.
	02.11 Explain legal terms, principles, doctrines, and laws specific to the radiologic sciences.
	02.12 Outline the conditions necessary for a valid malpractice claim in medical imaging.
	02.13 Describe institutional and professional liability protection typically available to the radiographer.
	02.14 Describe the components and implications of informed consent.
	02.15 Identify standards for informed consent and disclosure of protected health information (PHI).
	02.16 Describe how consent forms are used relative to specific radiographic procedures.
	02.17 Differentiate between civil and criminal liability.
	02.18 Define tort and explain the differences between intentional and unintentional torts.
03.0	Demonstrate introductory knowledge of radiologic science and the health care system. The student will be able to:
	03.01 Identify health science professions that contribute to the total health care of the patient.
	03.02 Identify and collaborate with relationships and interdependencies within a health care institution.
	03.03 Identify various settings involved in the delivery of health care.
	03.04 Discuss the reimbursement/payment options for health care services.
	03.05 Discuss the role and value of a mission statement to the operation of a healthcare institution.
	03.06 Discuss the responsibilities and relationships of all personnel in the radiology department.
	03.07 Differentiate between quality assurance (QA) and continuous quality improvement (CQI).
	03.08 Differentiate between accreditation types.
	03.09 Define credentialing, national certification, registration, and state licensure.
	03.10 Discuss career opportunities and advancement for the radiographer.
	03.11 Identify the benefits of continuing education as related to improved patient care and professional development.
	03.12 Describe the types, purposes, and functions of professional organizations (ASRT).
	03.13 Identify educational and certification requirements.

	03.14 Identify state and federal regulatory agencies.
04.0	Demonstrate knowledge of and perform patient care procedures required in radiologic sciences. The student will be able to:
	04.01 Identify the responsibilities of the health care facility and members of the health care team.
	04.02 List the general responsibilities of the radiographer.
	04.03 Describe the practice standards for the radiographer as defined by the ASRT and state licensure.
	04.04 Differentiate between culture and ethnicity.
	04.05 Describe end-of-life options, including living wills, advance directives, and Do Not Resuscitate (DNR) orders.
	04.06 Identify methods for determining the correct patient for a given procedure.
	04.07 Explain the use of various communication models.
	04.08 Explain specific aspects of a radiographic procedure to the patient.
	04.09 Demonstrate correct principles of body mechanics applicable to patient care.
	04.10 Demonstrate techniques for specific types of patient transfer.
	04.11 Demonstrate select procedures to turn patients who have various health conditions.
	04.12 Describe immobilization techniques for various types of procedures and patient conditions.
	04.13 Describe specific patient safety measures and concerns.
	04.14 Explain the purpose, legal considerations, and procedures for incident reporting.
	04.15 Describe methods to evaluate the patient's physical status.
	04.16 List the information to be collected prior to a patient examination.
	04.17 Describe vital signs and lab values used to assess the condition of the patient, including sites for assessment and normal values.
	04.18 Define terms related to infection control.
	04.19 Describe the importance of standard precautions and isolation procedures, including sources and modes of transmission of infection and disease and institutional control procedures.
	04.20 Identify symptoms related to specific emergency situations.
	04.21 Describe the institution’s emergency medical code system and the role of the student during a medical emergency.

	04.22 Explain the age-specific considerations necessary when performing radiographic procedures.
	04.23 Describe appropriate procedures for the management of various types of trauma situations.
	04.24 Describe the symptoms and medical interventions for a patient with a contrast agent reaction.
	04.25 Explain the role of the radiographer in patient education.
	04.26 Identify specific types of tubes, lines, catheters, and collection devices.
	04.27 Outline the steps in the operation and maintenance of suction equipment.
	04.28 Outline the steps in the operation and maintenance of oxygen equipment and demonstrate proper use.
	04.29 Demonstrate competency in basic life support (BLS).
	04.30 Describe the steps in performing various mobile procedures.
	04.31 Describe the special problems faced in performing procedures on a patient with a tracheotomy and specific tubes, drains, and catheters.
	04.32 Describe the procedure for producing diagnostic images in the surgical suite.
	04.33 Explain the appropriate radiation protection required when performing mobile/surgical radiography.
	04.34 Describe the patient preparation for contrast studies.
05.0	Demonstrate an understanding of pharmacology and venipuncture procedure as they relate to radiologic science. The student will be able to:
	05.01 Distinguish between the chemical, generic, and trade names of various drugs.
	05.02 Describe the pharmacokinetic, pharmacodynamics, and pharmacogenetic principles of drugs.
	05.03 Explain the uses and impact on the patient of different categories of drugs.
	05.04 Define the categories of contrast agents and give specific examples for each category.
	05.05 Explain the pharmacology of contrast agents.
	05.06 Describe methods and techniques for administering various types of contrast agents.
	05.07 Identify and describe the routes of drug administration.
	05.08 Identify the appropriateness of contrast media to examinations.

	05.09 Differentiate between the two major sites of intravenous drug administration.
	05.10 Identify, describe, and document complications associated with venipuncture and appropriate actions to resolve these complications.
	05.11 Discuss the various elements of initiating and discontinuing intravenous access.
	05.12 Differentiate and document dose calculations for adult and pediatric patients.
	05.13 Prepare for injection of contrast agents/intravenous medications using aseptic technique.
	05.14 Explain the current legal status and professional liability issues of the radiographer's role in contrast and/or drug administration.
	05.15 Simulate appropriate venipuncture technique.
06.0	Demonstrate proficiency in the skills, techniques, and knowledge required for image analysis. The student will be able to:
	06.01 Discuss the elements of a radiographic image.
	06.02 Identify anatomy on radiographic images.
	06.03 Apply a problem-solving process used for image analysis.
	06.04 Describe an effective image analysis method.
	06.05 Describe the role of the radiographer in image analysis.
	06.06 Apply the process for evaluating images for adequate image receptor exposure, exposure indicator, contrast/greyscale/spatial resolution, identification markers, and appropriate use of beam restriction.
	06.07 Summarize the importance of proper positioning.
	06.08 Discuss the impact of patient preparation on the resulting radiographic image.
	06.09 Identify common equipment malfunctions that affect image quality, and corrective action.
	06.10 Differentiate between technical factor problems, procedural factor problems, and equipment malfunctions.
	06.11 Critique images for appropriate technical, procedural, and pathologic factors, and employ corrective actions if necessary.
	06.12 Differentiate images produced by various modalities.
	06.13 Apply a process for evaluating images for acceptable limits of distortion, image artifacts, radiation fog, noise, and gross exposure.
07.0	Demonstrate proficiency in the skills, techniques, and knowledge required to operate imaging equipment. The student will be able to:

	07.01 Describe potential difference, current, and resistance.
	07.02 Describe the general components and functions of the tube and filament circuits.
	07.03 Compare generators in terms of radiation produced and efficiency.
	07.04 Discuss mobile and fixed radiographic equipment in terms of purpose, components, types, and applications.
	07.05 Demonstrate operation of various types of permanently fixed and mobile radiographic equipment.
	07.06 Discuss fixed, fluoroscopy, and mobile equipment in terms of purpose, components, types, and applications.
	07.07 Describe the components and function of automatic exposure control (AEC) devices.
	07.08 Demonstrate proper use of AEC devices.
	07.09 Describe the components of diagnostic X-ray tubes.
	07.10 Explain methods used to extend x-ray tube life.
	07.11 Explain image-intensified, flat panel, and pulsed fluoroscopy.
	07.12 Indicate the purpose, construction, and application of the fluoroscopic monitor.
	07.13 Differentiate between quality assurance (QA) and quality control (QC).
	07.14 List the benefits of quality control management to the patient and the department.
	07.15 Evaluate the results of standard QC tests.
	07.16 Discuss the image appearance and basic principles of operation for equipment used in various imaging modalities.
	07.17 Describe continuous quality improvement (CQI).
	07.18 Describe the components of the various types of display monitors.
	07.19 Compare monitor types (e.g., acquisition, display).
	07.20 Discuss quality control (QC) for imaging equipment and accessories.
	07.21 Discuss the appropriate use of electronic masking.
	07.22 Recognize and compare basic equipment used in various imaging modalities.
08.0	Convey an understanding of the principles of imaging and the various factors that contribute to accuracy, including X-ray production, image formation, and factors related to radiographic quality. The student will be able to:

	08.01 Discuss practical considerations in setting standards for acceptable image quality.
	08.02 Assess radiographic exposure on radiographic images.
	08.03 Analyze the relationships of factors that control and affect image exposure.
	08.04 Analyze the relationship of factors that control and affect radiographic contrast.
	08.05 Critique spatial resolution on various radiographic images.
	08.06 Analyze the relationships of factors that control and affect spatial resolution.
	08.07 Differentiate between size and shape distortion.
	08.08 Perform calculations to determine image magnification and percent magnification.
	08.09 Summarize the relationship of factors that control and affect distortion.
	08.10 Explain the rationale for using beam restriction.
	08.11 Describe the operation and applications for different types of beam restriction devices.
	08.12 Explain how beam filtration affects x-ray beam intensity, beam quality, and patient exposure.
	08.13 Describe the change in the half-value layer (HVL) when filtration is added or removed.
	08.14 Describe the impact of sampling frequency on spatial resolution.
	08.15 Define sampling frequency.
	08.16 Describe the impact of detector element size on spatial resolution.
	08.17 Describe the Nyquist-Shannon theorem as it relates to sampling frequency.
	08.18 Describe the process of image stitching.
09.0	Demonstrate an understanding of the structure and function of the human body with a focus on the muscular, endocrine, respiratory, urinary, axial, and appendicular skeletal systems. The student will be able to:
	09.01 Discuss the basics of anatomical nomenclature.
	09.02 Classify tissue types, describe the functional characteristics of each, and give examples of their location within the human body.
	09.03 Describe the composition and characteristics of bone.
	09.04 Identify and locate the bones of the human skeleton.

09.05	Identify bony processes and depressions found on the human skeleton.
09.06	Summarize the functions of the skeletal system.
09.07	Describe and label the types of articulations specific to the axial and appendicular skeletal system.
09.08	Compare the types, locations, and movements permitted by the different types of articulations.
09.09	Differentiate between the structures of each type of muscle tissue.
09.10	State the function of each type of muscle tissue.
09.11	Name and locate the major muscles of the skeleton.
09.12	Describe the characteristics and functions of the components that comprise the endocrine system.
09.13	Differentiate between the peritoneum, omentum, and mesentery.
09.14	Label the components of the respiratory system.
09.15	Describe the physiology and regulation of respiration.
09.16	Label the parts of the kidneys, ureters, bladder, and urethra.
09.17	Describe the function of each organ of the urinary system.
09.18	Describe the composition and formation of urine.
09.19	Explain micturition.
09.20	Identify major sectional anatomical structures found within the head and neck, thorax, and abdomen.
09.21	Differentiate the primary and secondary curves of the spine.
10.0	Demonstrate proficiency in the skills, techniques, and knowledge required to perform accurate radiographic procedures. The student will be able to:
10.01	Describe standard positioning terms.
10.02	Demonstrate proper use of positioning aids.
10.03	Discuss general procedural considerations for radiographic exams.
10.04	Identify methods and barriers of communication and describe how each may be used or overcome effectively during patient education.

10.05	Develop an awareness of cultural factors that necessitate adapting standard exam protocols.
10.06	Adapt general procedural considerations to specific clinical settings.
10.07	Identify the structures demonstrated on routine radiographic images.
10.08	Adapt radiographic procedures for special considerations.
10.09	Simulate radiographic procedures on a person or phantom in a laboratory or clinical setting.
10.10	Evaluate images for positioning, centering, appropriate anatomy, and overall image quality.
10.11	Discuss equipment and supplies necessary to complete basic radiographic procedures.
10.12	Explain the routine and special positions and projections for all radiographic procedures.
10.13	Describe the general purpose of radiographic studies.
10.14	Apply general radiation safety and protection practices associated with radiographic examinations.
10.15	Define region of interest (ROI).
10.16	Define basic terms related to indications and contraindications related to imaging studies.
11.0	Demonstrate proficiency in the skills and knowledge required for clinical practice. The student will be able to:
11.01	Exercise the priorities required in daily clinical practice.
11.02	Execute medical imaging procedures under the appropriate level of supervision.
11.03	Adhere to team practice concepts that focus on organizational theories, roles of team members, and conflict resolution.
11.04	Adapt to changes and varying clinical situations.
11.05	Describe the role of health care team members in responding/reacting to a local or national emergency.
11.06	Provide patient-centered, clinically effective care for all patients regardless of age, gender, disability, special needs, ethnicity, or culture.
11.07	Integrate appropriate and effective written, oral, and nonverbal communication with patients, the public, and members of the health care team in the clinical setting.
11.08	Integrate appropriate personal and professional values into clinical practice.
11.09	Recognize the influence of professional values on patient care.

11.10 Explain how a person's cultural beliefs toward illness and health affect his or her health status.
11.11 Use patient and family education strategies appropriate to the comprehension level of the patient/family.
11.12 Provide desired psychosocial support to the patient and family.
11.13 Demonstrate competent assessment skills through effective management of the patient's physical and mental status.
11.14 Respond appropriately to medical emergencies.
11.15 Examine demographic factors that influence patient compliance with medical care.
11.16 Adapt procedures to meet age-specific, disease-specific, and cultural needs of patients.
11.17 Assess the patient and record clinical history.
11.18 Demonstrate basic life support procedures.
11.19 Use appropriate charting/electronic documentation methods.
11.20 Recognize life-threatening electrocardiogram (ECG) tracing.
11.21 Apply standard and transmission-based precautions.
11.22 Apply the appropriate medical asepsis and sterile technique.
11.23 Demonstrate competency in the principles of radiation protection standards.
11.24 Apply the principles of total quality management.
11.25 Report equipment malfunctions.
11.26 Examine procedure orders for accuracy and make corrective actions when applicable.
11.27 Demonstrate safe, ethical, and legal practices.
11.28 Integrate the radiographer's practice standards into the clinical practice setting.
11.29 Maintain patient confidentiality standards and meet HIPAA requirements.
11.30 Demonstrate the principles of transferring, positioning, and immobilizing patients.
11.31 Comply with departmental and institutional response to emergencies, disasters, and accidents.
11.32 Differentiate between emergency and non-emergency procedures.

	11.33 Adhere to national, institutional, and departmental standards, policies, and procedures regarding care of patients, providing radiologic procedures, and reducing medical errors.
	11.34 Select technical factors to produce quality diagnostic images with the lowest radiation exposure possible.
	11.35 Critique images for appropriate anatomy, image quality, and patient identification.
	11.36 Determine corrective measures to improve inadequate images.
12.0	Convey an understanding of the principles of imaging and the various factors that contribute to accuracy, including image acquisition and processing, scatter radiation control, and image evaluation. The student will be able to:
	12.01 Summarize the relationship of factors affecting scattered radiation.
	12.02 Evaluate the effects of scattered radiation on the image.
	12.03 Compare grid types.
	12.04 Select the most appropriate grid for a given clinical situation.
	12.05 Interpret grid efficiency in terms of grid ratio and frequency.
	12.06 Summarize the factors that influence grid cutoff.
	12.07 Evaluate grid artifacts.
	12.08 Explain the use of radiographic technique charts.
	12.09 Explain exposure factor considerations involved in selecting techniques.
	12.10 Compare fixed kilovoltage peak (kVp) and variable kVp systems.
	12.11 Apply the reciprocity law to clinical situations.
	12.12 Apply conversion factors for changes in the following areas: distance, grid, image receptors, reciprocity law, and 15 percent rule.
13.0	Demonstrate an understanding of the concepts and equipment required for digital image acquisition and display. The student will be able to:
	13.01 Define terminology associated with digital imaging systems.
	13.02 Describe the various types of digital receptors.
	13.03 Describe the response of digital detectors to exposure variations.
	13.04 Compare the advantages and limits of each receptor type.

13.05	Evaluate the spatial resolution of a digital imaging system.
13.06	Describe the histogram and the process or histogram analysis as it relates to automatic rescaling and determining an exposure indicator.
13.07	Relate the receptor exposure indicator values to technical factors, system calibration, part/beam/plate alignment, and patient exposure.
13.08	Describe the response of PSP systems to background and scatter radiation.
13.09	Use appropriate means of scatter control.
13.10	Avoid grid use errors associated with grid cutoff and Moiré effect.
13.11	Identify common limitations and technical problems encountered when using PSP systems.
13.12	Employ appropriate beam/part/receptor alignment to avoid histogram analysis errors.
13.13	Associate the impact of image processing parameters with the image appearance.
13.14	Apply the fundamental principles of radiographic exposure to digital detectors.
13.15	Evaluate the effect of a given exposure change on histogram shape, data width, and image appearance.
13.16	Describe the conditions that cause quantum mottle in a digital image.
13.17	Formulate a procedure or process to minimize histogram analysis and rescaling errors.
13.18	Examine the potential impact of digital radiographic systems on patient exposure and methods of practicing the as low as reasonably achievable (ALARA) concept with digital systems.
13.19	Describe the medical image management and processing system (MIMPS) and its function.
13.20	Identify components of a (MIMPS) medical image management processing system.
13.21	Define digital imaging and communications in medicine (DICOM).
13.22	Describe HIPAA concerns with electronic information.
13.23	Identify common problems associated with retrieving/viewing images within a MIMPS.
13.24	Describe the calculation of the exposure indicator (AAPM Task Group 116).
13.25	Relate how the values of interest (VOI) impact image appearance.
13.26	Describe signal-to-noise (SNR) as it relates to digital radiography detectors.

	13.27 Describe modulation transfer function (MTF) as it relates to digital radiography detectors.
	13.28 Describe contrast to noise (CNR) as it relates to digital radiography detectors.
	13.29 Describe detective quantum efficiency (DQE) for digital radiography detectors.
	13.30 Describe display monitor aspect ratio and its impact on image display.
	13.31 Identify critical components of the DICOM header.
	13.32 Relate the location and size of the ROI to the appearance of the image and exposure indicator.
	13.33 Discuss the impact of viewing angle, luminance, ambient lighting, and pixel size on image display.
14.0	Demonstrate an understanding of the structure and function of the human body with a focus on the circulatory/cardiovascular, digestive, and reproductive systems. The student will be able to:
	14.01 Describe the composition and characteristics of blood.
	14.02 List the types of blood cells and state their functions.
	14.03 Differentiate between blood plasma and serum.
	14.04 Outline the clotting mechanism.
	14.05 List the blood types.
	14.06 Label the parts of the human heart.
	14.07 Describe the flow of blood through the body and identify the main vessels.
	14.08 Describe the structure and function of arteries, veins, and capillaries.
	14.09 Differentiate between arterial blood in systemic circulation and arterial blood in pulmonary circulation.
	14.10 Outline the major pathways of lymphatic circulation.
	14.11 Correlate cardiac electrophysiology to a normal ECG tracing.
	14.12 Label the anatomy of the male and female reproductive organs.
	14.13 Analyze the function of each of the male and female reproductive organs.
	14.14 Describe the structures and functions of the components that comprise the human eye and ear.
	14.15 List the somatic senses.

	14.16 Describe the hard and soft palates.
	14.17 Describe the structure and function of the tongue.
	14.18 Identify the structure, function, and locations of the salivary glands.
	14.19 List and label the accessory organs of the digestive system, and describe their function and identify their secretions.
	14.20 Describe the composition and characteristics of the primary organs of the digestive system.
	14.21 Describe the function(s) of each primary organ of the digestive system.
	14.22 Differentiate between the layers of tissue that comprise the esophagus, stomach, small intestine, large intestine, and rectum.
	14.23 Explain the purpose of digestion.
	14.24 List the digestive processes that occur in the body.
15.0	Demonstrate proficiency in the skills, techniques, and knowledge required to perform accurate fluoroscopic procedures. The student will be able to:
	15.01 Identify the structures demonstrated on routine fluoroscopic images.
	15.02 Adapt fluoroscopic procedures for special considerations.
	15.03 Simulate fluoroscopic procedures on a person or phantom in a laboratory setting.
	15.04 Evaluate images for positioning, centering, appropriate anatomy, and overall image quality.
	15.05 Discuss equipment and supplies necessary to complete basic fluoroscopic procedures.
	15.06 Explain the patient preparation necessary for various contrast and special studies.
	15.07 Explain the routine and special positions/projections for all fluoroscopic procedures.
	15.08 Explain the purpose for using contrast media.
	15.09 Name the type, dosage, and route of administration of contrast media commonly used to perform radiographic contrast and special studies.
	15.10 Describe the general purpose of fluoroscopic studies.
	15.11 Apply general radiation safety and protection practices associated with fluoroscopic examinations.
16.0	Demonstrate an understanding of the structure and function of the human body with a focus on the nervous system. The student will be able to:

	16.01 State the structure of the brain and the relationship of its component parts.
	16.02 Describe brain functions.
	16.03 List the meninges and describe the function of each.
	16.04 Outline how cerebrospinal fluid forms, circulates, and functions.
	16.05 Describe the structure and function of the spinal cord.
	16.06 Determine the distribution and function of cranial and spinal nerves.
	16.07 Summarize the structure and function of components that comprise the autonomic nervous system.
17.0	Demonstrate introductory knowledge of computed tomography. The student will be able to:
	17.01 Explain the difference between reconstructing and reformatting an image.
	17.02 Cite the structures demonstrated on commonly performed CT images.
	17.03 Describe commonly performed CT procedures.
	17.04 Evaluate images for positioning, centering, appropriate anatomy, and overall image quality.
	17.05 Discuss equipment and supplies necessary to complete commonly performed CT procedures.
	17.06 Explain the patient preparation necessary for commonly performed CT contrast studies.
	17.07 Name the type, dosage purpose, and route of contrast administration for common CT procedures.
	17.08 Describe the components of the CT imaging system.
	17.09 Explain the functions of collimators in CT.
	17.10 List the CT computer data processing steps.
	17.11 Define algorithm and explain its impact on image scan factors and reconstruction.
	17.12 Define raw data and image data.

	17.13 Describe the following terms in relation to the CT data acquisition process: • Pixel • Matrix • Voxel • Linear attenuation coefficient • CT/Hounsfield number • Partial volume averaging • Window width (ww) and window level (wl) • Spatial resolution • Contrast resolution • Noise • Annotation • Region of interest (ROI)
18.0	Demonstrate appropriate venipuncture technique. The student will be able to:
	18.01 Differentiate between the two major sites of intravenous drug administration.
	18.02 Identify, describe, and document complications associated with venipuncture and appropriate actions to resolve these complications.
	18.03 Discuss the various elements of initiating and discontinuing intravenous access.
	18.04 Differentiate and document dose calculations for adult and pediatric patients.
	18.05 Prepare for injection of contrast agents/intravenous medications using aseptic technique.
	18.06 Explain the current legal status and professional liability issues of the radiographer’s role in contrast and/or drug administration.
	18.07 Simulate appropriate venipuncture technique.
19.0	Demonstrate an understanding of radiographic pathology. The student will be able to:
	19.01 Define basic terms related to pathology.
	19.02 Describe the basic manifestations of pathological conditions and their relevance to radiologic procedures.
	19.03 Discuss the classifications of trauma.
	19.04 Describe imaging procedures used in diagnosing disease.
	19.05 List the causes of tissue disruption.
	19.06 Describe the healing process.

	19.07 Identify complications connected with the repair and replacement of tissue.
	19.08 Describe the various systemic classifications of disease in terms of etiology, types, common sites, complications, and prognosis.
	19.09 Describe the radiographic appearance of diseases.
	19.10 Identify imaging procedures and interventional techniques appropriate for diseases common to each body system.
	19.11 Identify diseases caused by or connected to genetic factors.
20.0	Demonstrate an understanding of how radiation is produced and the characteristics of different classifications of radiation. The student will be able to:
	20.01 Describe the fundamental atomic structure.
	20.02 Describe the electromagnetic spectrum.
	20.03 Describe wavelength and frequency, and how they are related to velocity.
	20.04 Explain the relationship of energy, wavelength, and frequency.
	20.05 Explain the wave-particle duality phenomenon.
	20.06 Identify the properties of X-rays.
	20.07 Describe the processes of ionization and excitation.
	20.08 Describe particulate radiation.
	20.09 Differentiate between ionizing and nonionizing radiation.
	20.10 Describe radioactivity and radioactive decay in terms of alpha, beta, and gamma emission.
	20.11 Compare the production of bremsstrahlung and characteristic radiations.
	20.12 Describe the conditions necessary to produce X-radiation.
	20.13 Describe the X-ray emission spectrum.
	20.14 Explain the factors that affect the X-ray emission spectrum.
	20.15 Discuss various photon interactions with matter.
	20.16 Discuss relationships of wavelength and frequency to beam characteristics.
	20.17 Discuss the clinical significance of the photoelectric and modified scattering (Compton) interactions in diagnostic imaging.

	20.18 Compare and contrast different types of radiation.
21.0	Demonstrate an understanding of the structure and function of the human body, including the immune system and chemical composition of the body. The student will be able to:
	21.01 Describe the chemical composition of the human body.
	21.02 Identify cell structure and elements of genetic control.
	21.03 Explain the essentials of human metabolism.
	21.04 Differentiate between nonspecific defenses and specific immunity.
	21.05 Explain antibody production and function.
22.0	Demonstrate an understanding of the integral aspects of radiation biology required of a radiographer. The student will be able to:
	22.01 Differentiate between ionic and covalent molecular bonds.
	22.02 Describe principles of cellular biology.
	22.03 Identify sources of electromagnetic and particulate ionizing radiations.
	22.04 Discriminate between the direct and indirect effects of radiation.
	22.05 Identify sources of radiation exposure.
	22.06 Describe radiation-induced chemical reactions and potential biologic damage.
	22.07 Evaluate factors influencing radiobiologic/biophysical events at the cellular and subcellular level.
	22.08 Identify methods to measure radiation response.
	22.09 Describe physical, chemical, and biologic factors influencing the radiation response of cells and tissues.
	22.10 Explain factors influencing radiosensitivity.
	22.11 Recognize the clinical significance of lethal dose (LD).
	22.12 Identify the radiosensitivity and radioresistency of specific cells.
	22.13 Employ dose response curves to study the relationship between radiation dose levels and the degree of biologic response.
	22.14 Examine the effects of limited vs. total body exposure.
	22.15 Relate short-term and long-term effects as a consequence of high and low radiation doses.

	22.16 Differentiate between somatic and genetic radiation effects and discuss specific diseases or syndromes associated with them.
	22.17 Discuss stochastic and deterministic effects.
	22.18 Discuss embryonic and fetal effects of radiation exposure.
	22.19 Discuss risk estimates for radiation-induced malignancies.
	22.20 Discuss acute radiation syndromes.
	22.21 Define basic terms related to dose differences.
23.0	Convey the importance of proper radiation protection and the precautions radiographers should take to prevent unnecessary exposure to themselves and patients. The student will be able to:
	23.01 Identify and justify the need to minimize unnecessary radiation exposure of humans.
	23.02 Explain the objectives of a radiation protection program.
	23.03 Define radiation and radioactivity units of measurement.
	23.04 Identify effective dose limits (EDL) for occupational and non-occupational radiation exposure.
	23.05 Describe the ALARA concept.
	23.06 Identify the basis for occupational exposure limits.
	23.07 Distinguish between perceived risk and comparable risk.
	23.08 Describe the concept of the negligible individual dose (NID).
	23.09 Identify ionizing radiation sources from natural and man-made sources.
	23.10 Comply with legal and ethical radiation protection responsibilities of radiation workers.
	23.11 Describe the relationship between irradiated area and effective dose.
	23.12 Describe the theory and operation of radiation detection devices.
	23.13 Identify appropriate applications and limitations for each radiation detection device.
	23.14 Describe how isoexposure curves are used for radiation protection.
	23.15 Identify performance standards for beam-limiting devices.

23.16	Describe procedures used to verify performance standards for equipment.
23.17	Describe the operation of various interlocking systems for equipment.
23.18	Identify conditions and locations evaluated in an area survey for radiation protection.
23.19	Distinguish between controlled and non-controlled areas and list acceptable exposure levels.
23.20	Describe “Radiation Area” signs and identify appropriate placement sites.
23.21	Describe the function of federal, state, and local regulations governing radiation protection practices.
23.22	Describe the qualifications and responsibilities of a radiation safety officer.
23.23	Express the need and importance of personnel monitoring for radiation workers.
23.24	Describe personnel monitoring devices, including applications, advantages, and limitations for each device.
23.25	Interpret personnel monitoring reports.
23.26	Compare values for individual effective dose limits for occupational radiation exposures (annual and lifetime).
23.27	Identify effective dose limits for the embryo and fetus in occupationally exposed women.
23.28	Distinguish between primary and secondary radiation barriers.
23.29	Demonstrate how the operation of various x-ray and ancillary equipment influences radiation safety and describe the potential consequences of equipment failure.
23.30	Perform calculations of exposure with varying time, distance, and shielding.
23.31	Discuss the relationship between workload, energy, half-value layer (HVL), tenth-value layer (TVL), use factor, and shielding design.
23.32	Identify emergency procedures to be followed during failures of x-ray equipment.
23.33	Demonstrate how time, distance, and shielding can be manipulated to minimize radiation exposure.
23.34	Explain the relationship of beam-limiting devices to patient radiation protection.
23.35	Discuss added and inherent filtration in terms of the effect on patient dosage.
23.36	Explain the purpose and importance of patient shielding.
23.37	Identify various types of patient shielding and state the advantages and disadvantages of each type.
23.38	Use the appropriate method of shielding for a given radiographic or fluoroscopic procedure.

23.39	Explain the relationship of exposure factors to patient dosage.
23.40	Explain how patient position affects dose to radiosensitive organs.
23.41	Identify the appropriate image receptor that will result in an optimum diagnostic image with the minimum radiation exposure to the patient.
23.42	Select the immobilization techniques used to eliminate voluntary motion.
23.43	Describe the minimum source-to-tabletop distances for fixed and mobile fluoroscopic devices.
23.44	Apply safety factors for the patient, health care personnel, and family members in the room during radiographic/fluoroscopic procedures.

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as, experimental, quality, and safety procedures, are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate, and troubleshoot equipment/tools used to make observations. Students understand measurement error; and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

Special Notes

This program meets the Department of Health's education requirements for HIV/AIDS, Domestic Violence and Prevention of Medical Errors. Although not a requirement for initial licensure, it is a requirement for renewal, therefore the instructor **may** provide a certificate for renewal purposes to the student verifying these requirements have been met.

If students in this program are seeking a licensure, certificate, or registration through the Department of Health, please refer to 456.0635, F.S. for more information on disqualification for a license, certificate, or registration through the Department of Health.

Radiographers provide patient services using imaging modalities, as directed by physicians qualified to order and/or perform radiologic procedures. Radiographers usually provide patient care essential to radiologic procedures, including exercising judgment when performing medical imaging procedures. When providing patient services, the radiographer adheres to the principles of radiation protection for the patient, self, and others.

Radiographers accurately demonstrate anatomical structures on various imaging receptors by knowledge of anatomy, positioning, radiographic technique, and radiation protection. Radiographers must also be able to recognize emergency patient conditions and initiate lifesaving first aid. Additional duties may include performing quality assurance, processing film, and keeping patient records. Radiographers may be required to perform some of these duties at the patient's bedside or in the operating room.

The policies and process by which students receive clinical education shall be published and made known to all concerned in order to avoid practices in which students are substituted for paid staff. Students shall not take the responsibility or the place of qualified staff. After demonstrating competency, students may be permitted to perform procedures with indirect supervision. Unsatisfactory radiographs shall be repeated only in the presence of a qualified radiographer.

General Education Course Requirements for AS and AAS Degrees

State Board of Education Rule 6A-14.030(4), F.A.C., identifies 15 credit hours as the minimum amount of general education coursework required in the Associate of Science (AS) degree and the Associate of Applied Science (AAS) degree. In addition, Rule 6A-14.0303, F.A.C., implements s. 1007.25, F.S., and requires students entering a technical education degree program in the 2022-2023 academic year, and thereafter, to complete at least one identified core course in each subject area as part of the general education course requirements (15 credit hours total) before a degree is awarded. The core subject areas include:

- Communication.
- Humanities.
- Mathematics.
- Natural Sciences.
- Social Sciences.

Career and Technical Student Organization (CTSO)

CTSOs are co-curricular career and technical student organizations providing leadership training and reinforcing specific career and technical skills. Career and Technical Student Organizations provide activities for students as an integral part of the instruction offered. Other CTSOs not listed in this curriculum framework or recognized by the Florida Department of Education are permissible provided they support student mastery over the standards and benchmarks of this curriculum framework.

Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

Florida Department of Education
Curriculum Framework

The standards and benchmarks for this program were updated for the 2026-27 academic year.

Program Title: **Medical Laboratory Technology**
Career Cluster: **Health Science**

Associate in Science	
CIP Number	1351100405
Program Type	College Credit
Program Length	76 credit hours
CTSO	HOSA
SOC Codes (all applicable)	For program SOC codes, please see the Program and Course Tables section of the CTE Program Resources page linked below.
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml

Purpose

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Health Science career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of Health Science career cluster.

The purpose of this program is to prepare students for employment as medical/clinical laboratory technologists (medical clinical laboratory technologist) or medical laboratory technologists (associate degree) or to provide supplemental training for persons previously or currently employed in these occupations.

The content includes, but is not limited to, specific techniques and instruments, identification of factors directly affecting procedures and results, confirmation of results, monitoring quality control programs within pre-determined parameters, and correction of errors using pre-set standards. A clinical component is a necessary element of this program.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Program Structure

This program is a planned sequence of instruction consisting of 76 credit hours.

When developing the course sequence for the local implementation of this program, select courses that:

- Meet the skill development requirements of the standards and benchmarks of this program.
- Meet the general education core course requirements of Rule 6A-14.0303, Florida Administrative Code.
- Where reasonable and practicable, align with programs offered by your institution or other postsecondary institutions in Florida, including:
    - Related CCC and ATD credentials.
    - Baccalaureate degrees within the same career pathway and/or Federal CIP code.

Visit FloridaShines' Discover Programs website to identify other institutions that offer similar programs to review their course sequencing. Where appropriate, course alignment between institutions offering related programs can facilitate interagency student articulation.

Visit FloridaShines' Common Prerequisites Manual to identify courses that are prerequisites for admission into an upper division program. When sub-baccalaureate courses are aligned to the course admissions requirements of baccalaureate programs with the same career pathway, students can enter upper division coursework seamlessly.

Regulated Programs

This program is regulated by the Florida Board of Clinical Laboratory Personnel: http://floridasclinicallabs.gov/

Florida's Career Readiness Skills for CTE Programs

Employability Skills	
01.0	Apply academic skills to workplace scenarios.
01.01	Use reading skills.
01.02	Use writing skills.
01.03	Use mathematical strategies and procedures.
01.04	Use scientific principles and procedures.
02.0	Design a solution to an industry problem.
02.01	Use critical thinking.
02.02	Use creativity.
02.03	Make sound decisions.
02.04	Solve problems.
02.05	Reason.
02.06	Plan and organize.
03.0	Manage resources within an industry project
03.01	Manage time.
03.02	Manage money or resources.
03.03	Manage materials.
03.04	Manage personnel.
04.0	Oversee the subcomponents, operations and output of a technical or organizational system.
04.01	Manage systems.
04.02	Monitor systems.
04.03	Improve systems.
05.0	Use information for decision making.
05.01	Locate information.
05.02	Organize information.
05.03	Use information.

	05.04 Analyze information.
	05.05 Communicate information.
06.0	Apply relevant technology to workplace scenarios to aid productivity.
	06.01 Use technology.
07.0	Interpret and express interpersonal communication.
	07.01 Communicate verbally.
	07.02 Listen actively.
	07.03 Comprehend written material.
	07.04 Convey information in writing.
	07.05 Communicate nonverbally.
	07.06 Interpret nonverbal communication.
08.0	Interact with others to accomplish workplace goals.
	08.01 Collaborate with others in a team.
	08.02 Respond to customer needs.
	08.03 Exercise leadership.
	08.04 Negotiate to resolve conflict.
	08.05 Respect others.
09.0	Manage personal behavior to maximize productivity and professional growth.
	09.01 Demonstrate responsibility and self-discipline.
	09.02 Adapt and show flexibility.
	09.03 Work independently.
	09.04 Demonstrate a willingness to learn.
	09.05 Demonstrate integrity.
	09.06 Demonstrate professionalism.
	09.07 Take initiative.
	09.08 Display positive attitude.
	09.09 Take responsibility for professional growth.

Job Attainment	
10.0	Find, assess and apply to job opportunities.
10.01	Identify online job posts relevant to his or her career aspirations.
10.02	Compare and contrast the job posts' required qualifications, job duties, compensation, benefits and employers.
10.03	Define what information, documentation and writing prompts are required for the positions.
11.0	Communicate personal competence, character and fit for a job opportunity.
11.01	Develop a resume.
11.02	Write a cover letter.
11.03	Curate a professional portfolio that includes work products.
11.04	Prepare for and experience a mock job interview.
12.0	Cultivate and leverage relationships to professionally advance.
12.01	Request a signed reference letter, letter of recommendation and/or an online skill/professionalism endorsement.
12.02	Develop a plan to cultivate a professional digital footprint.
12.03	Develop a networking plan for a specific industry of interest.

Standards

After successfully completing this program, the student will be able to perform the following:

01.0 Demonstrate knowledge of the healthcare delivery system and health occupations.
02.0 Demonstrate the ability to communicate and use interpersonal skills effectively.
03.0 Demonstrate legal and ethical responsibilities.
04.0 Demonstrate an understanding of and apply wellness and disease concepts.
05.0 Recognize and practice safety and security procedures.
06.0 Recognize and respond to emergency situations.
07.0 Recognize and practice infection control procedures.
08.0 Demonstrate an understanding of information technology applications in healthcare.
09.0 Demonstrate employability skills.
10.0 Demonstrate knowledge of bloodborne diseases, including HIV/AIDS.
11.0 Apply basic math and science skills.
12.0 Demonstrate accepted professional, communication, and interpersonal skills.
13.0 Discuss phlebotomy in relation to the healthcare setting.
14.0 Identify the anatomic structure and function of body systems in relation to services performed by the phlebotomist.
15.0 Recognize and identify collection reagents supplies, equipment, and interfering chemical substances.
16.0 Demonstrate skills and knowledge necessary to perform phlebotomy.
17.0 Practice infection control following standard precautions.
18.0 Practice accepted procedures of transporting, accessioning, and processing specimens.
19.0 Practice quality assurance and safety.
20.0 Demonstrate knowledge and use of basic laboratory equipment and techniques.
21.0 Demonstrate basic knowledge of and perform clinical laboratory Point-of-Care (POC) testing (Waived).
22.0 Demonstrate basic knowledge of and perform Point-of-Care (POC) Testing using CLIA-approved waived instrumentation.
23.0 Discuss the general responsibilities and functions encountered by a medical laboratory technician.
24.0 Apply quality assurance principles and protocols for laboratory equipment.
25.0 Demonstrate knowledge of the operation of computer systems.
26.0 Demonstrate an understanding of the basic principles of molecular diagnostics.
27.0 Demonstrate knowledge of urinalysis and body fluids principles and procedures.
28.0 Demonstrate knowledge of hematological principles and procedures.
29.0 Demonstrate knowledge of hemostasis and related diagnostic principles and procedures.
30.0 Demonstrate knowledge of immunology principles and procedures.
31.0 Demonstrate knowledge of clinical chemistry principles and procedures.
32.0 Demonstrate knowledge of immunohematology principles and procedures.
33.0 Demonstrate knowledge of microbiological principles and procedures.
34.0 Demonstrate knowledge of advanced hematological principles and procedures.
35.0 Demonstrate knowledge of advanced hemostasis testing.
36.0 Demonstrate knowledge of advanced microbiological principles and procedures.

37.0 Demonstrate knowledge of advanced clinical chemistry principles and procedures.
38.0 Demonstrate knowledge of advanced immunological procedures.
39.0 Demonstrate knowledge of advanced immunohematology principles and procedures.
40.0 Demonstrate an understanding of advanced principles of molecular diagnostics.

Florida Department of Education
Student Performance Standards

Program Title: **Medical Laboratory Technology**
CIP Number: **1351100405**
Program Length: **76 credit hours**

Standards 1-11 are referred to as the **Health Science Core** and are required standards in this program. Secondary and Postsecondary students completing the health science core will not have to repeat the core in any other health science program in which it is a part. When the recommended sequence is followed, the structure allows students to complete at specified points for employment or remain for advanced training or cross-training.

To ensure consistency whenever these courses are offered, the health science core standards (1-11) and benchmarks have been placed in a separate document. To access this document, visit this link:
https://www.fldoe.org/core/fileparse.php/20569/urlt/health-sci-core-psav-cc-2324.rtf

At the completion of this program, the student will be able to:	
12.0	Demonstrate accepted professional, communication, and interpersonal skills. The student will be able to:
12.01	Demonstrate the appropriate professional behavior of a phlebotomist and describe the scope of practice.
12.02	Explain to the patient the procedure to be used in specimen collection.
12.03	Explain in detail the importance of identifying patients correctly when drawing blood.
12.04	Explain the importance of continuing education in relation to certification to maintain competency and skills.
13.0	Discuss phlebotomy in relation to the healthcare setting. The student will be able to:
13.01	List, classify, and discuss various departments and services within the health care setting in which the phlebotomist must interact with to obtain laboratory specimens from patients.
13.02	Identify the major departments/sections with the clinical laboratory, the major types of procedures run in each department/section, and their specimen requirements.
13.03	Describe roles of the major classifications of clinical laboratory personnel (i.e., pathologist, chief/administrative technologist, CLS, MLS, MLT, MT, phlebotomist, lab assistant, etc.).
14.0	Identify the anatomic structure and function of body systems in relation to services performed by the phlebotomist. The student will be able to:
14.01	Describe and define major body systems with emphasis on the circulatory system.
14.02	List and describe the main superficial veins used in performing venipuncture.

	14.03 Locate the most appropriate sites(s) for capillary and venipuncture.
	14.04 Describe the function of the following blood components: erythrocytes, thrombocytes, leukocytes, and plasma.
	14.05 Compare and contrast serum and plasma as they relate to blood collection.
	14.06 Discuss hemostasis, hemolysis, and methods of prevention as they relate to blood collection.
15.0	Recognize and identify collection reagents supplies, equipment, and interfering chemical substances. The student will be able to:
	15.01 Identify and discuss the proper use of appropriate types of equipment needed to collect various clinical laboratory blood specimens by venipuncture.
	15.02 Explain the special precautions and types of equipment needed to collect blood from the pediatric patient.
	15.03 Identify and discuss the proper use of supplies used in collecting micro-specimens.
	15.04 Identify and discuss the proper use of the various types of anticoagulants, preservatives, and gels used in blood collection and the vacuum tube color-codes for these additives.
	15.05 Describe the types of specimens that are analyzed in the clinical laboratory and the phlebotomist's role in collecting and/or transporting these specimens to the laboratory.
	15.06 Describe substances potentially encountered during phlebotomy that can interfere with the analysis of blood constituents.
	15.07 Define and utilize correct medical terminology and metric measurement needed for specimen collection.
16.0	Demonstrate skills and knowledge necessary to perform phlebotomy. The student will be able to:
	16.01 Follow approved procedure for completing a laboratory requisition form and recognize a properly completed form.
	16.02 Apply established protocol for patient and specimen identification for transport to a reference lab.
	16.03 Demonstrate knowledge of established protocol for patient and specimen identification.
	16.04 Discuss appropriate methods for facilitating and preparing the patient for capillary and venipuncture collection.
	16.05 List appropriate antiseptic agents useful in preparing sites for capillary and venipuncture for adult and pediatric patients.
	16.06 Know how to perform venipuncture by evacuated tube, butterfly, and syringe systems.
	16.07 Describe the correct order of draw.
	16.08 Describe the use of barcoding systems used for positive patient identification and specimen identification.
	16.09 Convey an understanding of capillary puncture using appropriate supplies and techniques for both adult and pediatric patients.

	16.10 Describe the most common complications associated with capillary and venipuncture, their causes, prevention, and treatment.
	16.11 Recognize and respond to possible adverse patient reactions such as allergies, convulsions, syncope, and lightheadedness.
	16.12 Perform appropriate procedures for disposing of used or contaminated capillary and venipuncture supplies.
	16.13 Perform appropriate techniques for making a peripheral blood smear for hematologic evaluation.
	16.14 Demonstrate the proper procedure for collecting blood cultures.
	16.15 Demonstrate a working understanding of how the age and weight of patients impact the maximum amount of blood that can be safely drawn.
17.0	Practice infection control following standard precautions. The student will be able to:
	17.01 Demonstrate proper hand hygiene.
	17.02 Comply with standard infection control precautions.
	17.03 Identify potential routes of infection and their complications.
18.0	Practice accepted procedures of transporting, accessioning, and processing specimens. The student will be able to:
	18.01 Follow the approved procedure for preparation and processing (e.g., centrifugation, separation, aliquoting, labeling, and storage) of serum, plasma, urine, sputum, stool, and wound culture specimens.
	18.02 Demonstrate knowledge of accessioning procedures.
	18.03 Describe the importance of time considerations for specimen collection, transporting, and delivery.
	18.04 Describe routine procedures for transporting and processing specimens, including U.S. Department of Transportation packaging requirements.
19.0	Practice quality assurance and safety. The student will be able to:
	19.01 Distinguish and perform procedures that ensure the reliability of test results when collecting laboratory specimens.
	19.02 Demonstrate knowledge of and practice appropriate patient safety.
	19.03 Practice safety in accordance with OSHA (State & Federal guidelines) for chemical, biological, and PPE established procedures, including proper disposal of sharps and biohazardous materials.
	19.04 Follow policies and procedures for work-related accidents.
	19.05 Implement appropriate Joint Commission patient safety goals and other accrediting/regulatory agency guidelines.
20.0	Demonstrate knowledge and use of basic laboratory equipment and techniques. The student will be able to:

	20.01 Identify the parts of the microscope and explain the function of each.
	20.02 Demonstrate the proper technique for use of the microscope.
	20.03 Demonstrate use of standard laboratory equipment, including pipetting skills and preventative maintenance.
	20.04 Perform basic laboratory math calculations, including serial dilutions and making solutions.
	20.05 Understand the principles of quality assurance to correct problems encountered in monitoring daily quality control.
	20.06 Evaluate laboratory findings to confirm results according to standard operating procedure and best laboratory practices.
	20.07 Demonstrate knowledge of principles and operation of basic laboratory instruments.
21.0	Demonstrate basic knowledge of and perform clinical laboratory Point-of-Care (POC) testing (Waived). The student will be able to:
	21.01 Demonstrate the ability to interpret instructions of point-of-care testing, including, but not limited to the following: Test principle • Storage and Stability • Internal vs. External Quality Control • Specimen collection and preparation • Directions for use • Interpretation of results • Interfering substances
	21.02 Demonstrate and discuss knowledge of lot numbers use and importance regarding both kits and reagents.
	21.03 Demonstrate knowledge of the frequency of performing quality control procedures.
	21.04 Explain the Clinical Laboratory Improvement Amendments (CLIA) 88 classification of laboratory testing into waived, moderate, and highly complex, including the personnel qualified to perform each.
22.0	Demonstrate basic knowledge of and perform Point-of-Care (POC) testing using CLIA-approved waived instrumentation. The student will be able to:
	22.01 Demonstrate and perform POC testing specific to microbiology, hematology, urinalysis, and clinical chemistry.
	22.02 Perform instrument maintenance.
	22.03 Demonstrate knowledge of quality control and calibrations involved with the POC instruments.
	22.04 Identify normal limits and associate abnormal results with disease or disorders.
	22.05 Discuss the significance of reporting critical values as it applies to (POC) testing as soon as possible.
23.0	Discuss the general responsibilities and functions encountered by a medical laboratory technician. The students will be able to:

	23.01 Ask appropriate scientific questions and recognize what is involved in experimental approaches to the solutions of such questions.
	23.02 Communicate laboratory results to healthcare professionals.
	23.03 Demonstrate ability to evaluate laboratory results under the supervision of a medical laboratory scientist.
	23.04 Demonstrate ability to report laboratory results in written or oral form under the supervision of a medical laboratory scientist.
	23.05 List licensure and certification requirements of the major classifications of clinical laboratory personnel.
24.0	Apply quality assurance principles and protocols for laboratory equipment. The student will be able to:
	24.01 Assess specimen acceptability using standard operating procedure, including rejection/recollection criteria.
	24.02 Describe procedures for transporting and processing specimens.
	24.03 Describe the clinical laboratory role in providing quality assurance in laboratory testing, reporting, and the use and maintenance of equipment.
	24.04 Understand the need for calibration of laboratory equipment.
	24.05 Demonstrate and record quality control procedures required for the tests performed and recognize unacceptable results.
	24.06 Report identified problems encountered in daily quality control according to standard operating procedures.
25.0	Demonstrate knowledge of the operation of computer systems. The student will be able to:
	25.01 Discuss the role of computer systems in laboratory data management.
	25.02 Demonstrate knowledge of common computer terminology.
	25.03 Demonstrate entry-level computer operations for specimen accessioning, data reporting, and quality control recording.
	25.04 Demonstrate entry-level operational skills in the use of computer-interfaced analytical instrumentation.
26.0	Demonstrate an understanding of the basic principles of molecular diagnostics. The student will be able to:
	26.01 Discuss the principles and major steps of the polymerase chain reaction (PCR).
	26.02 Discuss the structure, function, and components of DNA and RNA.
	26.03 Define the key terms of molecular diagnostics.
	26.04 List and describe the principles of DNA, RNA, and molecular diagnostic testing.
	26.05 Compare the advantages and disadvantages of molecular techniques over traditional diagnostic tests for infectious diseases.

	26.06 Identify the types of samples appropriate for molecular diagnostics.
	26.07 Discuss the ethical impact of genetic technologies.
	26.08 Outline requirements for reducing contamination in a molecular lab.
	26.09 Discuss nucleic acid probes and their role in clinical laboratory diagnostics.
27.0	Demonstrate knowledge of urinalysis and body fluids principles and procedures. The student will be able to:
	27.01 Identify the components of the urinary system and explain their functions.
	27.02 Discuss diseases affecting the urinary system.
	27.03 Describe collection, transport, and storage procedures for random and timed urine specimens.
	27.04 Discuss specific gravity techniques.
	27.05 Perform non-automated urinalysis techniques for chemical exam of the urine and interpret results.
	27.06 Demonstrate the proper use of automated urinalysis analyzers.
	27.07 Describe renal function tests.
	27.08 Describe principles of and perform routine physical and chemical analyses on urine.
	27.09 Prepare urine sediments and perform identification and quantitation of microscopic formed elements.
	27.10 Correlate abnormal physical, chemical, and microscopic urine results with associated pathological conditions.
	27.11 Differentiate between transudates and exudates.
	27.12 Perform physical, chemical, and microscopic evaluations of common body fluids.
28.0	Demonstrate knowledge of hematological principles and procedures. The student will be able to:
	28.01 Discuss the organs, cells, and cellular interactions of the lymphoid, myeloid, and reticuloendothelial systems.
	28.02 Demonstrate an understanding of basic concepts of hematopoiesis.
	28.03 Identify the components of blood.
	28.04 Discuss the function of formed elements of blood.
	28.05 Demonstrate an understanding of the synthesis of normal and abnormal molecular structure of hemoglobin, common hemoglobinopathies, and associated tests.

28.06	Describe normal hemoglobin-oxygen function using the oxygen dissociation curve (ODC).
28.07	Discuss assessment and impact of preanalytical, analytical, and post-analytical factors on hematology testing.
28.08	Calculate red blood cell indices.
28.09	Discuss selected cytochemical staining and flow cytometry procedures.
28.10	Evaluate red blood cell morphology.
28.11	State the review process of histogram/scatterplot/scattergram analysis.
28.12	Describe the categories used in a morphological classification of anemias.
28.13	Correlate complete blood cell results with a peripheral exam of blood smear.
28.14	List the white blood cell maturation sequence and identify distinguishing morphology for the stages of developing white blood cells.
28.15	Discuss normal and abnormal hematology findings, reference ranges, and associated diseases.
28.16	Demonstrate an understanding of normal and abnormal white cell morphology, related disease states, and associated tests.
28.17	Discuss the principles of and perform routine hematology procedures, applying quality control procedures as necessary.
28.18	Perform commonly used methods to evaluate leukocytes, correlate, and verify automated cell counts with established criteria.
28.19	Identify characteristic findings of nonmalignant leukocytic disorders (e.g., shift to the left, toxic granulation, Döhle bodies, etc.).
28.20	Perform techniques of manual blood smear evaluation, including white blood cell differential, red cell, and platelet morphology.
28.21	Correlate peripheral blood evaluation with automated cell analysis.
28.22	Perform platelet and white blood cell counts on specimens using manual techniques, diluents, and correlate counts with peripheral smear.
29.0	Demonstrate knowledge of hemostasis and related diagnostic principles and procedures. The student will be able to:
29.01	Discuss and define the mechanisms of hemostasis, including bleeding and clotting.
29.02	Discuss common coagulopathies and associated treatments.
29.03	Discuss the assessment and impact of pre-analytical factors on hemostasis testing
29.04	Describe the principles of and perform routine testing used in the evaluation of primary and secondary hemostasis.
29.05	Demonstrate use of hemostasis laboratory equipment.

	29.06 Discuss additional hemostasis tests performed to differentiate the cause of abnormal routine tests.
30.0	Demonstrate knowledge of immunology principles and procedures. The student will be able to:
	30.01 Discuss the functions of the cells of the immune system, cytokines, and regulatory molecules.
	30.02 Discuss physical and chemical properties of immunogens (antigens), immunoglobulins (antibodies), and complement.
	30.03 Compare and contrast the principles of basic agglutination, flocculation, and precipitation procedures in immunology/serology.
	30.04 Perform basic procedures in immunology/serology.
	30.05 Discuss principles of serum protein electrophoresis and immunofixation.
	30.06 Discuss the clinical significance of the commonly performed immunological tests.
	30.07 Discuss selected serological tests.
31.0	Demonstrate knowledge of clinical chemistry principles and procedures. The student will be able to:
	31.01 Identify the chemistry analytes used to evaluate various organ functions.
	31.02 Discuss principles of and perform common renal function tests.
	31.03 Discuss carbohydrate, protein, and lipid metabolism.
	31.04 Discuss principles of and perform commonly ordered tests related to carbohydrate, protein, and lipid metabolism.
	31.05 Discuss the liver and its functions and related analytes.
	31.06 Discuss principles of and perform commonly ordered liver function tests.
	31.07 Discuss enzyme classification, origin, activity, and function.
	31.08 Discuss principles of and perform commonly ordered enzyme procedures.
	31.09 Discuss electrolyte balance as related to health and disease.
	31.10 Discuss principles of and perform electrolyte analyses.
	31.11 Discuss principles of and perform commonly ordered tests to evaluate cardiac function.
	31.12 Discuss the physiology of the endocrine system and the principal tests used to evaluate endocrine function.
	31.13 Discuss the role of the laboratory in therapeutic drug monitoring and toxicology.

	31.14 Discuss and perform general electrophoresis techniques.
	31.15 Discuss the clinical significance of commonly ordered clinical chemistry tests.
	31.16 Demonstrate knowledge of principles of instrumentation as related to the clinical chemistry laboratory.
	31.17 Discuss techniques of clinical chemistry related to the standardization of procedures and use of standards, blanks, and controls.
	31.18 Discuss other techniques of clinical chemistry.
	31.19 Discuss basic techniques of clinical chemistry related to normal and abnormal physiology.
32.0	Demonstrate knowledge of immunohematology principles and procedures. The student will be able to:
	32.01 Discuss donor interviews, criteria for selection, phlebotomy preparation, and donor blood processing.
	32.02 Discuss blood component collection, preparation, storage, and use.
	32.03 Describe the roles of the Federal Drug Administration (FDA), American Association of Blood Banks (AABB), and state agencies, and how to contact each.
	32.04 Compare the advantages and disadvantages of autologous versus homologous (allogenic) blood collection and transfusion.
	32.05 Discuss the basic genetics of the blood group antigens.
	32.06 Discuss the ABO blood group system testing procedures and recognize ABO discrepancies.
	32.07 Describe required tests on recipient blood samples.
	32.08 Discuss and differentiate other blood group systems such as Duffy, Kell, Kidd, S,s, Lu, and the common cold-reacting antibodies such as Le, P, I, M, and N.
	32.09 Perform Rh testing to determine Rh phenotypes.
	32.10 Perform and interpret antibody screening.
	32.11 Perform antibody identification tests to detect clinically significant antibodies.
	32.12 Discuss the safety and determine the compatibility of blood components for transfusion.
	32.13 Discuss and perform routine compatibility testing, including the immediate spin crossmatch and the electronic crossmatch.
	32.14 Discuss and perform phenotyping on recipient and donor specimens.
	32.15 Identify symptoms of the suspected transfusion reaction and the required laboratory work-up.

	32.16 Discuss immune hemolytic disorders and perform the direct antiglobulin test.
	32.17 Discuss specialized techniques in immunohematology.
	32.18 Perform quality control (QC) on reagents.
	32.19 Describe the pathophysiology of hemolytic disease of the fetus and newborn.
33.0	Demonstrate knowledge of microbiological principles and procedures. The student will be able to:
	33.01 Discuss microbial taxonomy and nomenclature.
	33.02 Discuss bacterial metabolism, reproduction, cell structures, and their functions.
	33.03 Discuss classification, composition, and preparation of culture media.
	33.04 Discuss the human pathogenesis of bacteria.
	33.05 Discuss and perform sterilization techniques.
	33.06 Perform culturing techniques for urine, stool, wound, respiratory, body fluids, and blood specimens.
	33.07 Perform techniques of microbiology related to inoculation and transfer of cultures.
	33.08 Discuss the principles of Gram and Acid-Fast Bacilli (AFB) stains.
	33.09 Accurately perform, read, and report Gram stains.
	33.10 Perform techniques necessary for isolation and identification of aerobic, anaerobic, and facultative bacterial organisms.
	33.11 Identify commonly encountered aerobic bacteria through morphological, physical, and biochemical properties.
	33.12 Perform and interpret antimicrobial susceptibility tests.
	33.13 Discuss the collection and handling of specimens for fungal, mycobacterial, and viral culture.
	33.14 Prepare and examine specimens and identify ova and parasites when present.
34.0	Demonstrate knowledge of advanced hematological principles and procedures. The student will be able to:
	34.01 Correlate histogram/scatterplot/scattergram with differential results.
	34.02 Describe the categories used in the etiological classification of anemias.
	34.03 Perform quality control procedures and identify preestablished quality control limits/criteria.

	34.04 Perform critical analysis using preestablished reporting guidelines, identification, classification, and differentiation of neoplastic disorders.
	34.05 Discuss the principles and applications of flow cytometry.
	34.06 Discuss the principle of hemoglobin electrophoresis with pattern interpretation.
35.0	Demonstrate knowledge of advanced hemostasis testing. The student will be able to:
	35.01 Discuss the principle of mixing studies and factor assays.
	35.02 Correlate the laboratory test results for fibrinolysis with conditions affecting the fibrinolytic system.
	35.03 Perform additional hemostasis tests to differentiate the cause of abnormal routine tests.
	35.04 Correlate laboratory results with possible inherited and/or acquired coagulation abnormalities.
	35.05 Discuss and perform platelet studies (e.g., platelet aggregation, thromboelastography (TEG), etc.).
	35.06 Discuss and perform testing to monitor antithrombotic drug therapies.
	35.07 Describe methods available for molecular testing and the clinical hemostasis lab.
36.0	Demonstrate knowledge of advanced microbiological principles and procedures. The student will be able to:
	36.01 Discuss procedures for aerobic, facultative, and anaerobic identification, and the clinical significance of different bacteria.
	36.02 Classify fungi and state their clinical significance.
	36.03 Identify pathogenic fungi and perform techniques used in identifying fungi.
	36.04 Differentiate between pathogenic and nonpathogenic fungi.
	36.05 Discuss and perform automated microbiological procedures.
	36.06 Identify life cycles, modes of transmission, prevention, and pathophysiology of clinically significant parasites.
	36.07 Discuss microbial and immunological techniques to identify clinically significant viruses.
	36.08 Discuss classification and related disease states of clinically significant viruses.
	36.09 Identify commonly used antibiotics, their usage, and mechanisms of activity.
	36.10 Discuss and perform molecular testing to identify bacteria, parasites, fungi, and significant viruses.
37.0	Demonstrate knowledge of advanced clinical chemistry principles and procedures. The student will be able to:

	37.01 Perform, calculate, analyze, and recognize normal/abnormal electrophoresis procedures.
	37.02 Perform and interpret immunoassay procedures and results.
	37.03 Perform and recognize associated disease states for selected isoenzyme assays.
	37.04 Perform, calculate, and recognize associated disease states for blood lipid profiles.
	37.05 Perform selected procedures related to analyzing hormones and evaluating endocrine function.
	37.06 Perform selected assays for therapeutic drug monitoring and toxic substances.
	37.07 Analyze toxicology results.
	37.08 Discuss the principles and procedures of blood gas analysis, including arterial specimen collection and clinical significance.
38.0	Demonstrate knowledge of advanced immunological procedures. The student will be able to:
	38.01 Perform serological tests such as immunofluorescence assays.
	38.02 Discuss and interpret antinuclear antibody patterns and their relationship to disease states.
	38.03 Discuss MHC and HLA proteins and their application to transplant technology and rejection.
39.0	Demonstrate knowledge of advanced immunohematology principles and procedures. The student will be able to:
	39.01 Describe donor suitability criteria.
	39.02 Discuss the various parameters of the required testing of donor blood according to AABB Standards.
	39.03 Describe the preparation and use of washed red cells, leukocyte-reduced red cells, and platelet concentrations from donor units.
	39.04 Describe the preparation and use of cryoprecipitate and fresh frozen plasma.
	39.05 Describe the principle and use of the antiglobulin test, both direct and indirect methods, including the purpose of using IgG-sensitized cells.
	39.06 Perform methods of adsorption and elution techniques.
	39.07 Perform procedures for identification of multiple antibodies in the recipient specimen, including enzyme enhancement, dosage, temperature, and complement binding.
	39.08 Determine the appropriate dosage of Rh Immune Globulin based on test results.
	39.09 Interpret the preliminary investigation results to determine whether a transfusion reaction has occurred.

40.0	Demonstrate an understanding of advanced principles of molecular diagnostics. The student will be able to:
	40.01 Describe the steps used to prepare genomic DNA and RNA from blood and buccal cells.
	40.02 Discuss the extraction, purification, and storage of nucleic acids.
	40.03 Describe the process of Fluorescent In-Situ Hybridization (FISH).
	40.04 Compare and contrast real-time PCR and conventional PCR.
	40.05 Explain baseline threshold and CT-values of PCR curves.
	40.06 Explain Sanger sequencing.
	40.07 Explain Next-generation sequencing.

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools, and equipment, as well as experimental, quality, and safety procedures, are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate, and troubleshoot equipment/tools used to make observations. Students understand measurement error and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

Clinical learning experiences in a clinical laboratory and related areas are an integral part of this program. Clinical learning experiences should reflect the full breadth of responsibilities expected of a Medical Laboratory Technician and should include appropriate experience in each of the areas of the laboratory described herein. The specified length for each of the courses listed is inclusive of clinical experience for each of the respective laboratory sections.

Special Notes

This program meets the Department of Health HIV/AIDS, Domestic Violence, and Prevention of Medical Errors education requirements. Upon completion of this program, the instructor will provide a certificate to the student verifying that these requirements have been met.

If students in this program are seeking a licensure, certificate, or registration through the Department of Health, please refer to 456.0635, F.S. for more information on disqualification for a license, certificate, or registration through the Department of Health.

The Core should be taken first in the program. Following the successful completion of the core, the student is eligible to take the National Health Care Foundation Skill Standards Assessment with instructor approval and the completion of a portfolio.

General Education Course Requirements for AS and AAS Degrees

State Board of Education Rule 6A-14.030(4), F.A.C., identifies 15 credit hours as the minimum amount of general education coursework required in the Associate of Science (AS) degree and the Associate of Applied Science (AAS) degree. In addition, Rule 6A-14.0303, F.A.C., implements s. 1007.25, F.S., and requires students entering a technical education degree program in the 2022-2023 academic year, and thereafter, to complete at least one identified core course in each subject area as part of the general education course requirements (15 credit hours total) before a degree is awarded. The core subject areas include:

- Communication.
- Humanities.
- Mathematics.
- Natural Sciences.
- Social Sciences.

Career and Technical Student Organization (CTSO)

CTSOs are co-curricular career and technical student organizations providing leadership training and reinforcing specific career and technical skills. Career and Technical Student Organizations provide activities for students as an integral part of the instruction offered. Other CTSOs not listed in this curriculum framework or recognized by the Florida Department of Education are permissible provided they support student mastery over the standards and benchmarks of this curriculum framework.

Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology, and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

Florida Department of Education
Curriculum Framework

Program Title: **Histologic Technology**
Career Cluster: **Health Science**

Associate in Science	
CIP Number	1351100800
Program Type	College Credit
Program Length	76 credit hours
CTSO	HOSA
SOC Codes (all applicable)	For program SOC codes, please see the Program and Course Tables section of the CTE Program Resources page linked below.
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml

Purpose

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Health Science career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of Health Science career cluster.

The purpose of this program is to prepare students for employment as tissue technologists (Medical and Clinical Laboratory Technologists) or histotechnicians or to provide supplemental training for persons previously or currently employed in these occupations.

The content includes but is not limited to preparation of tissue specimens of human and animal origin for research, teaching purposes, or diagnosis of body dysfunction and malignancy. A clinical component is a necessary element of this program.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Program Structure

This program is a planned sequence of instruction consisting of 76 credit hours.

When developing the course sequence for the local implementation of this program, select courses that:

- Meet the skill development requirements of the standards and benchmarks of this program.

- Meet the general education core course requirements of Rule 6A-14.0303, Florida Administrative Code.
- Where reasonable and practicable, align with programs offered by your institution or other postsecondary institutions in Florida, including:
    - Related CCC and ATD credentials.
    - Baccalaureate degrees within the same career pathway and/or Federal CIP code.

Visit FloridaShines' Discover Programs website to identify other institutions that offer similar programs to review their course sequencing. Where appropriate, course alignment between institutions offering related programs can facilitate interagency student articulation.

Visit FloridaShines' Common Prerequisites Manual to identify courses that are prerequisites for admission into an upper division program. When sub-baccalaureate courses are aligned to the course admissions requirements of baccalaureate programs with the same career pathway, students can enter upper division coursework seamlessly.

Florida's Career Readiness Skills for CTE Programs

Employability Skills	
01.0	Apply academic skills to workplace scenarios.
01.01	Use reading skills.
01.02	Use writing skills.
01.03	Use mathematical strategies and procedures.
01.04	Use scientific principles and procedures.
02.0	Design a solution to an industry problem.
02.01	Use critical thinking.
02.02	Use creativity.
02.03	Make sound decisions.
02.04	Solve problems.
02.05	Reason.
02.06	Plan and organize.
03.0	Manage resources within an industry project
03.01	Manage time.
03.02	Manage money or resources.
03.03	Manage materials.
03.04	Manage personnel.
04.0	Oversee the subcomponents, operations and output of a technical or organizational system.
04.01	Manage systems.
04.02	Monitor systems.
04.03	Improve systems.
05.0	Use information for decision making.
05.01	Locate information.
05.02	Organize information.
05.03	Use information.

	05.04 Analyze information.
	05.05 Communicate information.
06.0	Apply relevant technology to workplace scenarios to aid productivity.
	06.01 Use technology.
07.0	Interpret and express interpersonal communication.
	07.01 Communicate verbally.
	07.02 Listen actively.
	07.03 Comprehend written material.
	07.04 Convey information in writing.
	07.05 Communicate nonverbally.
	07.06 Interpret nonverbal communication.
08.0	Interact with others to accomplish workplace goals.
	08.01 Collaborate with others in a team.
	08.02 Respond to customer needs.
	08.03 Exercise leadership.
	08.04 Negotiate to resolve conflict.
	08.05 Respect others.
09.0	Manage personal behavior to maximize productivity and professional growth.
	09.01 Demonstrate responsibility and self-discipline.
	09.02 Adapt and show flexibility.
	09.03 Work independently.
	09.04 Demonstrate a willingness to learn.
	09.05 Demonstrate integrity.
	09.06 Demonstrate professionalism.
	09.07 Take initiative.
	09.08 Display positive attitude.
	09.09 Take responsibility for professional growth.

Job Attainment	
10.0	Find, assess and apply to job opportunities.
10.01	Identify online job posts relevant to his or her career aspirations.
10.02	Compare and contrast the job posts' required qualifications, job duties, compensation, benefits and employers.
10.03	Define what information, documentation and writing prompts are required for the positions.
11.0	Communicate personal competence, character and fit for a job opportunity.
11.01	Develop a resume.
11.02	Write a cover letter.
11.03	Curate a professional portfolio that includes work products.
11.04	Prepare for and experience a mock job interview.
12.0	Cultivate and leverage relationships to professionally advance.
12.01	Request a signed reference letter, letter of recommendation and/or an online skill/professionalism endorsement.
12.02	Develop a plan to cultivate a professional digital footprint.
12.03	Develop a networking plan for a specific industry of interest.

Standards

After successfully completing this program, the student will be able to perform the following:

01.0 Demonstrate knowledge of the health care delivery system and health occupations.
02.0 Demonstrate the ability to communicate and use interpersonal skills effectively.
03.0 Demonstrate legal and ethical responsibilities.
04.0 Demonstrate an understanding of and apply wellness and disease concepts.
05.0 Recognize and practice safety and security procedures.
06.0 Recognize and respond to emergency situations.
07.0 Recognize and practice infection control procedures.
08.0 Demonstrate an understanding of information technology applications in healthcare.
09.0 Demonstrate employability skills.
10.0 Demonstrate knowledge of blood borne diseases, including HIV/AIDS.
11.0 Apply basic math and science skills.
12.0 Identify the anatomic structure and function of body systems in relation to disease states and services performed by the histotechnician.
13.0 Practice quality assurance, safety, and acceptable communication skills.
14.0 Adhere to legal and ethical principles related to the practice of histotechnology.
15.0 Demonstrate knowledge of histology laboratory operations related to accessioning.
16.0 Demonstrate knowledge of histology laboratory operations related to grossing.
17.0 Demonstrate knowledge of histology laboratory operations related to tissue processing.
18.0 Demonstrate knowledge of histology laboratory operations related to embedding.
19.0 Demonstrate knowledge of histology laboratory operations related to microtomy.
20.0 Perform tissue preparation techniques.
21.0 Maintain histology laboratory equipment.

Florida Department of Education
Student Performance Standards

Program Title: **Histologic Technology**
CIP Number: **1351100800**
Program Length: **76 credit hours**

Standards 1-11 are referred to as the **Health Science Core** and are required standards in this program. Secondary and Postsecondary students completing the health science core will not have to repeat the core in any other health science program in which it is a part. When the recommended sequence is followed, the structure allows students to complete at specified points for employment or remain for advanced training or cross-training.

To ensure consistency whenever these courses are offered, the health science core standards (1-11) and benchmarks have been placed in a separate document. To access this document, visit this link:
https://www.fldoe.org/core/fileparse.php/20569/urlt/health-sci-core-psav-cc-2324.rtf

At the completion of this program, the student will be able to:	
12.0	Identify the anatomic structure and function of body systems in relation to disease states and services performed by the histotechnician. The student will be able to:
12.01	Demonstrate knowledge of human anatomy and physiology as related to histotechnology.
12.02	Demonstrate knowledge of normal histology of human organs.
12.03	Demonstrate knowledge of various methods of obtaining histological specimens from patients.
12.04	Identify tissue structures and cellular components; relate both to physiological functions.
12.05	Demonstrate knowledge of types of histological specimens usually submitted for gross and microscopic examination or submitted for gross description only.
12.06	Demonstrate knowledge of the processing of histologic specimens especially as related to disease processes.
12.07	Demonstrate knowledge of tissue processing methods and schedules, depending on tissue type and size including variety of fixatives used and how each relates to different tissue components and the disease process to be diagnosed.
13.0	Practice quality assurance, safety and acceptable communication skills. The student will be able to:
13.01	Practice quality control in the histology laboratory as required by the accrediting agency.
13.02	Follow institutional policies and procedures related to safety.
13.03	Demonstrate knowledge of medical terminology.

	13.04 Recognize errors and their sources, and take corrective action.
	13.05 Demonstrate knowledge of chemical hazards and acceptable exposure limits within the histopathology laboratory.
	13.06 Demonstrate knowledge of proper disposal methods for all chemical and biological waste within the histopathology laboratory with emphasis on both state and local requirements.
	13.07 Implement procedures to meet regulatory and accreditation agency patient safety guidelines.
14.0	Adhere to legal and ethical principles related to the practice of histotechnology. The student will be able to:
	14.01 Practice discretion and confidentiality with protected health information in regard to laboratory reports, requisitions and computer monitors.
	14.02 Demonstrate knowledge of the histotechnician's role and responsibilities in relation to the health care team.
	14.03 Demonstrate knowledge of the legal ramifications of pathology practice of laboratory medicine.
15.0	Demonstrate knowledge of histology laboratory operations related to accessioning. The student will be able to:
	15.01 Demonstrate the understanding of evaluation of acceptable specimen protocol including proper patient identification.
	15.02 Recognize specimens submitted for special studies (i.e., Immunofluorescence, Quantitative Iron).
	15.03 Verify positive patient ID.
16.0	Demonstrate knowledge of histology laboratory operations related to grossing. The student will be able to:
	16.01 Demonstrate knowledge of fixation types and volume to size.
	16.02 Demonstrate the need for accurate labeling of cassettes with accession number and sub-parts in relation to gross description.
	16.03 Explain the purpose of macroscopic descriptions according to standard grossing protocol.
	16.04 Recognize the measures of loss prevention of small specimens (i.e., sponges, lens paper, biopsy bags).
	16.05 Identify the processes of the integrity of minute fragments including but not limited to cell blocks.
	16.06 Demonstrate knowledge of decalcification procedures by specimen type.
	16.07 Triage specimens for size for appropriate tissue processing schedules.
17.0	Demonstrate knowledge of histology laboratory operations related to tissue processing. The student will be able to:
	17.01 Demonstrate knowledge of the types of tissue processors including routine, microwave and rapid.

	17.02 Perform the operation and maintenance of equipment.
	17.03 Perform the preparation of a reagent.
	17.04 Create tissue processing schedules by size and tissue type.
	17.05 Perform tissue processor maintenance including changing and rotation of reagents.
	17.06 Recognize the difference in paraffin types for histological processes including their composition, utility, and melting point.
18.0	Demonstrate knowledge of histology laboratory operations related to embedding. The student will be able to:
	18.01 Recognize adequacy of tissue processing and rectify if possible.
	18.02 Recognize special instructions given from the gross team.
	18.03 Verify the number of pieces and cassettes submitted.
	18.04 Select the appropriate size of mold for the size of tissue being embedded.
	18.05 Perform the proper orientation of tissue pieces (i.e., Punch biopsies, tubes, veins).
	18.06 Apply knowledge of the prevent air bubbles and multi-layering of paraffin.
	18.07 Apply quality control measures for the temperatures of paraffin including daily recording.
19.0	Demonstrate knowledge of histology laboratory operations related to microtomy. The student will be able to:
	19.01 Demonstrate the use of microtomy tools and microtomes including alignment and angles, and proper disposal of blades.
	19.02 Select the appropriate thickness of sections for routine specimens and special procedures.
	19.03 Identify the number of slides and levels per block as indicated.
	19.04 Demonstrate techniques for facing/trimming into blocks for full section.
	19.05 Perform slide selection for all specimen types including slides with adhesives for bones and nails.
20.0	Perform tissue preparation techniques. The student will be able to:
	20.01 Demonstrate an understanding of the need for proper histologic specimen identification.
	20.02 Perform the clinically appropriate preparation and histochemical staining techniques when ordered by the pathologist.
	20.03 Identify and troubleshoot problems encountered in histological staining and reagent preparation procedures.

	20.04 Demonstrate the knowledge of the current methods of immunohistochemistry procedures for the detection of antigen.
	20.05 Evaluate, validate and understand new preparation and staining procedures.
	20.06 Distinguish between well-prepared and stained and poorly prepared and stained histologic specimens.
	20.07 Identify tissue structures and their staining characteristics.
	20.08 Demonstrate knowledge of frozen section use and techniques.
21.0	Maintain histology laboratory equipment. The student will be able to:
	21.01 Perform routine maintenance of equipment and instruments within specified limits to include: • embedding centers • tissue processors • microtomes • cryostat
	21.02 Refer to appropriate person(s) for complex repairs.
	21.03 Follow procedures for accessibility and maintenance of service records.

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as, experimental, quality, and safety procedures are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate and troubleshoot equipment/tools used to make observations. Students understand measurement error; and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

Special Notes

This program meets the Department of Health's education requirements for HIV/AIDS, Domestic Violence and Prevention of Medical Errors. Although not a requirement for initial licensure, it is a requirement for renewal, therefore the instructor **may** provide a certificate for renewal purposes to the student verifying these requirements have been met.

If students in this program are seeking a licensure, certificate, or registration through the Department of Health, please refer to 456.0635, F.S. for more information on disqualification for a license, certificate, or registration through the Department of Health.

The Core should be taken first in the program. Following the successful completion of the core, the student is eligible to take the National Health Care Foundation Skill Standards Assessment with instructor approval and the completion of a portfolio.

General Education Course Requirements for AS and AAS Degrees

State Board of Education Rule 6A-14.030(4), F.A.C., identifies 15 credit hours as the minimum amount of general education coursework required in the Associate of Science (AS) degree and the Associate of Applied Science (AAS) degree. In addition, Rule 6A-14.0303, F.A.C., implements s. 1007.25, F.S., and requires students entering a technical education degree program in the 2022-2023 academic year, and thereafter, to complete at least one identified core course in each subject area as part of the general education course requirements (15 credit hours total) before a degree is awarded) The core subject areas include:

- Communication.
- Humanities.
- Mathematics.
- Natural Sciences.
- Social Sciences.

Career and Technical Student Organization (CTSO)

CTSOs are co-curricular career and technical student organizations providing leadership training and reinforcing specific career and technical skills. Career and Technical Student Organizations provide activities for students as an integral part of the instruction offered. Other CTSOs not listed in

this curriculum framework or recognized by the Florida Department of Education are permissible provided they support student mastery over the standards and benchmarks of this curriculum framework.

Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

Florida Department of Education
Curriculum Framework

The standards and benchmarks for this program were updated for the 2026-27 academic year.

Program Title: **Opticianry**
Career Cluster: **Health Science**

Associate in Science	
CIP Number	1351180100
Program Type	College Credit
Program Length	72 credit hours
CTSO	HOSA
SOC Codes (all applicable)	For program SOC codes, please see the Program and Course Tables section of the CTE Program Resources page linked below.
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml

Purpose

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Health Science career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of Health Science career cluster.

This program is designed to prepare students for employment as dispensing opticians, optician apprentices, dispensing), opticians: dispensing and measuring (Opticians, Dispensing) or to provide supplemental training for persons previously or currently employed in these occupations.

The content includes but is not limited to lens surfacing, finishing and mounting; dispensing of completed prescriptions; fitting contact lenses; frame repair, business management techniques and human relations.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Program Structure

This program is a planned sequence of instruction consisting of 72 credit hours.

When developing the course sequence for the local implementation of this program, select courses that:

- Meet the skill development requirements of the standards and benchmarks of this program.
- Meet the general education core course requirements of Rule 6A-14.0303, Florida Administrative Code.
- Where reasonable and practicable, align with programs offered by your institution or other postsecondary institutions in Florida, including:
    - Related CCC and ATD credentials.
    - Baccalaureate degrees within the same career pathway and/or Federal CIP code.

Visit FloridaShines' Discover Programs website to identify other institutions that offer similar programs to review their course sequencing. Where appropriate, course alignment between institutions offering related programs can facilitate interagency student articulation.

Visit FloridaShines' Common Prerequisites Manual to identify courses that are prerequisites for admission into an upper division program. When sub-baccalaureate courses are aligned to the course admissions requirements of baccalaureate programs with the same career pathway, students can enter upper division coursework seamlessly.

Regulated Programs

The program must be approved by the: Commission on Opticianry Accreditation, P.O. Box 592, Canton, NY 13617, (703) 468-0566. Graduates of a recognized program with an A.S. Degree are eligible to take the Florida optician licensure examination administered by the Department of Business and Professional Regulation for the Board of Opticianry (Chapter 484, F.S.; Rule Chapter 21, F.A.C.).

Florida's Career Readiness Skills for CTE Programs

Employability Skills	
01.0	Apply academic skills to workplace scenarios.
01.01	Use reading skills.
01.02	Use writing skills.
01.03	Use mathematical strategies and procedures.
01.04	Use scientific principles and procedures.
02.0	Design a solution to an industry problem.
02.01	Use critical thinking.
02.02	Use creativity.
02.03	Make sound decisions.
02.04	Solve problems.
02.05	Reason.
02.06	Plan and organize.
03.0	Manage resources within an industry project
03.01	Manage time.
03.02	Manage money or resources.
03.03	Manage materials.
03.04	Manage personnel.
04.0	Oversee the subcomponents, operations and output of a technical or organizational system.
04.01	Manage systems.
04.02	Monitor systems.
04.03	Improve systems.
05.0	Use information for decision making.
05.01	Locate information.
05.02	Organize information.
05.03	Use information.

	05.04 Analyze information.
	05.05 Communicate information.
06.0	Apply relevant technology to workplace scenarios to aid productivity.
	06.01 Use technology.
07.0	Interpret and express interpersonal communication.
	07.01 Communicate verbally.
	07.02 Listen actively.
	07.03 Comprehend written material.
	07.04 Convey information in writing.
	07.05 Communicate nonverbally.
	07.06 Interpret nonverbal communication.
08.0	Interact with others to accomplish workplace goals.
	08.01 Collaborate with others in a team.
	08.02 Respond to customer needs.
	08.03 Exercise leadership.
	08.04 Negotiate to resolve conflict.
	08.05 Respect others.
09.0	Manage personal behavior to maximize productivity and professional growth.
	09.01 Demonstrate responsibility and self-discipline.
	09.02 Adapt and show flexibility.
	09.03 Work independently.
	09.04 Demonstrate a willingness to learn.
	09.05 Demonstrate integrity.
	09.06 Demonstrate professionalism.
	09.07 Take initiative.
	09.08 Display positive attitude.
	09.09 Take responsibility for professional growth.

Job Attainment	
10.0	Find, assess and apply to job opportunities.
10.01	Identify online job posts relevant to his or her career aspirations.
10.02	Compare and contrast the job posts' required qualifications, job duties, compensation, benefits and employers.
10.03	Define what information, documentation and writing prompts are required for the positions.
11.0	Communicate personal competence, character and fit for a job opportunity.
11.01	Develop a resume.
11.02	Write a cover letter.
11.03	Curate a professional portfolio that includes work products.
11.04	Prepare for and experience a mock job interview.
12.0	Cultivate and leverage relationships to professionally advance.
12.01	Request a signed reference letter, letter of recommendation and/or an online skill/professionalism endorsement.
12.02	Develop a plan to cultivate a professional digital footprint.
12.03	Develop a networking plan for a specific industry of interest.

Standards

After successfully completing this program, the student will be able to perform the following:

01.0 Demonstrate knowledge of the health care delivery system and health occupations.
02.0 Demonstrate the ability to communicate and use interpersonal skills effectively.
03.0 Demonstrate legal and ethical responsibilities.
04.0 Demonstrate an understanding of and apply wellness and disease concepts.
05.0 Recognize and practice safety and security procedures.
06.0 Recognize and respond to emergency situations.
07.0 Recognize and practice infection control procedures.
08.0 Demonstrate an understanding of information technology applications in healthcare.
09.0 Demonstrate employability skills.
10.0 Demonstrate knowledge of blood borne diseases, including HIV/AIDS.
11.0 Apply basic math and science skills.
12.0 Surface ophthalmic lenses.
13.0 Edge and finish lenses.
14.0 Insert and mount lenses.
15.0 Select and order frames and lenses.
16.0 Fit and dispense prescriptions.
17.0 Fit contact lenses.
18.0 Repair frames.
19.0 Demonstrate knowledge of office management.
20.0 Practice effective business management operation techniques.
21.0 Demonstrate knowledge of anatomy and physiology of the eye.
22.0 Demonstrate knowledge of the effects ophthalmic devices have in correcting the errors of human vision.
23.0 Practice technical and business computer functions.

Florida Department of Education
Student Performance Standards

Program Title: **Optician**
CIP Number: **1351180100**
Program Length: **72 credit hours**

Standards 1-11 are referred to as the **Health Science Core** and are required standards in this program. Secondary and Postsecondary students completing the health science core will not have to repeat the core in any other health science program in which it is a part. When the recommended sequence is followed, the structure allows students to complete at specified points for employment or remain for advanced training or cross-training.

To ensure consistency whenever these courses are offered, the health science core standards (1-11) and benchmarks have been placed in a separate document. To access this document, visit this link:
https://www.fldoe.org/core/fileparse.php/20569/urlt/health-sci-core-psav-cc-2324.rtf

At the completion of this program, the student will be able to:
12.0 Surface ophthalmic lenses. The student will be able to:
12.01 Demonstrate knowledge of layout single vision and multi-focal lenses.
12.02 Demonstrate knowledge of fabrication of single vision lenses and/or multi-focal lenses.
12.03 Demonstrate knowledge of selecting ophthalmic lenses and supplies.
12.04 Perform lens verification and inspection.
13.0 Edge and finish lenses. The student will be able to:
13.01 Layout and block lenses.
13.02 Machine and hand edge lenses.
13.03 Perform lens verification and inspection.
13.04 Tint hard resin lenses.
13.05 Select appropriate lenses.
14.0 Insert and mount lenses. The student will be able to:
14.01 Insert lenses into plastic frames.

	14.02 Insert lenses into metal frames.
	14.03 Mount lenses into rimless and semi-rimless mountings or other appropriate designs.
	14.04 Perform final inspection of eye glasses.
	14.05 Demonstrate knowledge of lens enhancements/treatments.
15.0	Select and order frames and lenses. The student will be able to:
	15.01 Analyze written prescriptions.
	15.02 Duplicate prescriptions from existing lenses.
	15.03 Evaluate patient's life-style needs.
	15.04 Use selected instruments to assist in the calculation of fitting measurements, including position of wear (POW).
	15.05 Calculate lens size and availability.
	15.06 Discuss charges with patients.
	15.07 Demonstrate knowledge of managed vision care procedures.
	15.08 Order lenses and frames, including lens enhancements/treatments.
16.0	Fit and dispense prescriptions. The students will be able to:
	16.01 Verify finished prescriptions to specifications.
	16.02 Align frames.
	16.03 Adjust and fit optical devices to patients.
17.0	Fit contact lenses. The student will be able to:
	17.01 Analyze prescriptions.
	17.02 Evaluate patient suitability.
	17.03 Use selected instruments to conduct and assess fittings.
	17.04 Identify types of contact lenses.
	17.05 Perform patient training.

	17.06 Outline potential complications.
	17.07 Perform follow-up evaluations.
	17.08 Demonstrate knowledge of insertions and removal of various contact lens.
18.0	Repair frames. The student will be able to:
	18.01 Demonstrate the knowledge of restoring finish and replacement/repair trim on frames.
	18.02 Replace/repair nose pieces on plastic or metal frames.
	18.03 Demonstrate knowledge of soldering metal frames.
	18.04 Replace/repair frame-front, temples, monofilament, and rimless.
	18.05 Reshape damaged frames to lenses.
	18.06 Modify frames for special needs.
19.0	Demonstrate knowledge of office management. The student will be able to:
	19.01 Demonstrate knowledge of legal and ethical standards of vision care professionals.
	19.02 Maintain and file patient records.
	19.03 Demonstrate basic knowledge of managed vision care.
	19.04 Demonstrate knowledge of the collections and overdue accounts.
	19.05 Practice office supply control.
20.0	Practice effective business management operation techniques. The student will be able to:
	20.01 Develop a small business plan of operation.
	20.02 Develop an office policy/procedure manual.
	20.03 Demonstrate knowledge of business finance and operating expenses.
	20.04 Demonstrate the knowledge of setting up a pay scale and benefit program for employees and a bookkeeping system.
	20.05 Demonstrate knowledge of tax forms, payroll records, insurance needs and inventory needs.
	20.06 Demonstrate knowledge of employee hiring and orientation.

	20.07 Demonstrate knowledge of processes to resolve customer complaints.
	20.08 Demonstrate a working knowledge of basic compliance laws related to Opticianry.
21.0	Demonstrate knowledge of anatomy and physiology of the eye. The student will be able to:
	21.01 Demonstrate understanding of the interrelationships between body systems.
	21.02 Diagram and explain the anatomy of the visual system.
	21.03 Recognize and discuss physiological conditions of the eye.
22.0	Demonstrate knowledge of the effects ophthalmic devices have in correcting the errors of human vision. The student will be able to:
	22.01 Demonstrate knowledge of basic mathematical principles that are involved in ophthalmic and geometrical optics.
	22.02 Describe the influence of prisms on the behavior of light.
	22.03 Apply the principles of light acting on curved single refracting surface to the optics of ophthalmic lenses for parallel and nonparallel light.
	22.04 Describe the relationship and optical properties of cylindrical lenses.
	22.05 Demonstrate knowledge of the theory of lens surface power measuring devices.
	22.06 Create and eliminate prismatic effect by decentration.
	22.07 Demonstrate the influence of lens thickness and surface curvature.
23.0	Practice technical and business computer functions. The student will be able to:
	23.01 Demonstrate knowledge of technical computer functions.
	23.02 Demonstrate knowledge of practice management software and business applications of computers.

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as, experimental, quality, and safety procedures are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate and troubleshoot equipment/tools used to make observations. Students understand measurement error; and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

Special Notes

This program meets the Department of Health's education requirements for HIV/AIDS, Domestic Violence and Prevention of Medical Errors. Although not a requirement for initial licensure, it is a requirement for renewal, therefore the instructor **may** provide a certificate for renewal purposes to the student verifying these requirements have been met.

If students in this program are seeking a licensure, certificate, or registration through the Department of Health, please refer to 456.0635, F.S. for more information on disqualification for a license, certificate, or registration through the Department of Health.

The cooperative method of instruction is appropriate for this program. When the cooperative method is offered, the following is required for each student: a training plan signed by the student, instructor and employer which includes instructional objectives and a list of on-the-job and in-school learning experiences; a work station which reflects equipment, skills, and tasks which are relevant to the occupations which the student has chosen as a career goal. Students must receive compensation for work performed.

The CORE should be taken first in the program. Following the successful completion of the core, the student is eligible to take the National Health Care Foundation Skill Standards Assessment with instructor approval and the completion of a portfolio.

General Education Course Requirements for AS and AAS Degrees

State Board of Education Rule 6A-14.030(4), F.A.C., identifies 15 credit hours as the minimum amount of general education coursework required in the Associate of Science (AS) degree and the Associate of Applied Science (AAS) degree. In addition, Rule 6A-14.0303, F.A.C., implements s. 1007.25, F.S., and requires students entering a technical education degree program in the 2022-2023 academic year, and thereafter, to complete at least one identified core course in each subject area as part of the general education course requirements (15 credit hours total) before a degree is awarded) The core subject areas include:

- Communication.
- Humanities.
- Mathematics.
- Natural Sciences.
- Social Sciences.

Career and Technical Student Organization (CTSO)

CTSOs are co-curricular career and technical student organizations providing leadership training and reinforcing specific career and technical skills. Career and Technical Student Organizations provide activities for students as an integral part of the instruction offered. Other CTSOs not listed in this curriculum framework or recognized by the Florida Department of Education are permissible provided they support student mastery over the standards and benchmarks of this curriculum framework.

Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

Certificate Programs

A College Credit Certificate consists of a program of instruction of less than sixty (60) credits of college-level courses, which is part of an AS or AAS degree program and prepares students for entry into employment (Rule 6A-14.030, F.A.C.). This AS degree program includes the following College Credit Certificates:

Ophthalmic Laboratory Technician (0351100600) – 24 credit hours

Standards for the above certificate programs are contained in separate curriculum frameworks.

Florida Department of Education
Curriculum Framework

Program Title: **Ophthalmic Technician**
Career Cluster: **Health Science**

Associate in Science	
CIP Number	1351180301
Program Type	College Credit
Program Length	72 credit hours
CTSO	HOSA
SOC Codes (all applicable)	For program SOC codes, please see the Program and Course Tables section of the CTE Program Resources page linked below.
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml

Purpose

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Health Science career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of Health Science career cluster.

The purpose of this program is to prepare students for employment as ophthalmic technicians, optical goods workers (Health Technologists and Technicians) or provide supplemental training for persons previously or presently employed in this occupation.

The content includes but is not limited to (1) to perform specified ophthalmologic tests and procedures with skill, (2) understand and practice the art of ophthalmologic assisting, thereby providing the patient with medical care of the highest quality and accuracy, (3) to become members of the health care team who contribute to the physical and psychological comfort of the patient, (4) to provide a system of quality assurance for both equipment and treatment delivery, (5) and to understand the importance of maintaining membership in the professional organizations and keeping abreast of the changes in the field of ophthalmology.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Program Structure

This program is a planned sequence of instruction consisting of 72 credit hours.

When developing the course sequence for the local implementation of this program, select courses that:

- Meet the skill development requirements of the standards and benchmarks of this program.
- Meet the general education core course requirements of Rule 6A-14.0303, Florida Administrative Code.
- Where reasonable and practicable, align with programs offered by your institution or other postsecondary institutions in Florida, including:
    - Related CCC and ATD credentials.
    - Baccalaureate degrees within the same career pathway and/or Federal CIP code.

Visit FloridaShines' Discover Programs website to identify other institutions that offer similar programs to review their course sequencing. Where appropriate, course alignment between institutions offering related programs can facilitate interagency student articulation.

Visit FloridaShines' Common Prerequisites Manual to identify courses that are prerequisites for admission into an upper division program. When sub-baccalaureate courses are aligned to the course admissions requirements of baccalaureate programs with the same career pathway, students can enter upper division coursework seamlessly.

Florida's Career Readiness Skills for CTE Programs

Employability Skills	
01.0	Apply academic skills to workplace scenarios.
01.01	Use reading skills.
01.02	Use writing skills.
01.03	Use mathematical strategies and procedures.
01.04	Use scientific principles and procedures.
02.0	Design a solution to an industry problem.
02.01	Use critical thinking.
02.02	Use creativity.
02.03	Make sound decisions.
02.04	Solve problems.
02.05	Reason.
02.06	Plan and organize.
03.0	Manage resources within an industry project
03.01	Manage time.
03.02	Manage money or resources.
03.03	Manage materials.
03.04	Manage personnel.
04.0	Oversee the subcomponents, operations and output of a technical or organizational system.
04.01	Manage systems.
04.02	Monitor systems.
04.03	Improve systems.
05.0	Use information for decision making.
05.01	Locate information.
05.02	Organize information.
05.03	Use information.

	05.04 Analyze information.
	05.05 Communicate information.
06.0	Apply relevant technology to workplace scenarios to aid productivity.
	06.01 Use technology.
07.0	Interpret and express interpersonal communication.
	07.01 Communicate verbally.
	07.02 Listen actively.
	07.03 Comprehend written material.
	07.04 Convey information in writing.
	07.05 Communicate nonverbally.
	07.06 Interpret nonverbal communication.
08.0	Interact with others to accomplish workplace goals.
	08.01 Collaborate with others in a team.
	08.02 Respond to customer needs.
	08.03 Exercise leadership.
	08.04 Negotiate to resolve conflict.
	08.05 Respect others.
09.0	Manage personal behavior to maximize productivity and professional growth.
	09.01 Demonstrate responsibility and self-discipline.
	09.02 Adapt and show flexibility.
	09.03 Work independently.
	09.04 Demonstrate a willingness to learn.
	09.05 Demonstrate integrity.
	09.06 Demonstrate professionalism.
	09.07 Take initiative.
	09.08 Display positive attitude.
	09.09 Take responsibility for professional growth.

Job Attainment	
10.0	Find, assess and apply to job opportunities.
10.01	Identify online job posts relevant to his or her career aspirations.
10.02	Compare and contrast the job posts' required qualifications, job duties, compensation, benefits and employers.
10.03	Define what information, documentation and writing prompts are required for the positions.
11.0	Communicate personal competence, character and fit for a job opportunity.
11.01	Develop a resume.
11.02	Write a cover letter.
11.03	Curate a professional portfolio that includes work products.
11.04	Prepare for and experience a mock job interview.
12.0	Cultivate and leverage relationships to professionally advance.
12.01	Request a signed reference letter, letter of recommendation and/or an online skill/professionalism endorsement.
12.02	Develop a plan to cultivate a professional digital footprint.
12.03	Develop a networking plan for a specific industry of interest.

Standards

After successfully completing this program, the student will be able to perform the following:

01.0 Discuss the ophthalmic practice and personnel.
02.0 Discuss legal and ethical issues in the ophthalmic practice.
03.0 Describe the basic functions of the human body systems.
04.0 Discuss the anatomy and physiology of the human eye.
05.0 Describe the clinical findings of common ocular pathology.
06.0 Demonstrate knowledge of geometric and physiologic optics.
07.0 Demonstrate clinical knowledge of ocular and systemic medications.
08.0 Demonstrate the taking of an ocular and medical history.
09.0 Demonstrate basic ophthalmic clinical skills.
10.0 Demonstrate intermediate ophthalmic clinical skills.
11.0 Demonstrate knowledge of ophthalmic surgical procedures.
12.0 Discuss patient services provided or by the ophthalmic technician.
13.0 Demonstrate office safety and maintenance.
14.0 Demonstrate knowledge of patient vital signs and reactions.
15.0 Demonstrate advanced clinical skills.

Florida Department of Education
Student Performance Standards

Program Title: **Ophthalmic Technician**
CIP Number: **1351180301**
Program Length: **72 credit hours**

At the completion of this program, the student will be able to:	
01.0	Discuss the ophthalmic practice and personnel. The student will be able to:
01.01	List the professionals who work in the eye care industry.
01.02	Differentiate between licensure and certification of personnel.
01.03	Identify the general responsibilities of ophthalmic technical personnel, the ophthalmic scribe and the administrative staff.
01.04	Define the levels of training and certification of the ophthalmic medical professional.
01.05	Define the scope of practice of the ophthalmic technician.
02.0	Discuss legal and ethical issues in the ophthalmic practice. The student will be able to:
02.01	Identify methods of protection of personal health information for the patient.
02.02	Summarize the Health Information Portability Accountability Act as it pertains to care of the patient in the ophthalmic clinic.
02.03	Discuss ethical and legal standards of medical care.
02.04	Identify the components of a malpractice case, and methods employed to prevent negligence in the clinical setting.
02.05	Discuss physician and technician malpractice insurance.
02.06	Describe the process of informed consent.
03.0	Describe the basic functions of the human body systems. The student will be able to:
03.01	Discuss the components and functions of the respiratory and cardiovascular system.
03.02	Describe the anatomy and physiology of the endocrine and reproductive systems.
03.03	Identify the components of the integumentary and digestive systems.
03.04	Describe the structure and function of the musculoskeletal system.

	03.05 Discuss the components and functions of the nervous system.
04.0	Discuss the anatomy and physiology of the human eye. The student will be able to:
	04.01 Identify the bones and soft tissues of the orbit.
	04.02 List the components of the anterior and posterior segments of the eye.
	04.03 Discuss the anatomy of the eyelids and lacrimal system.
	04.04 Describe the anatomy and physiology of the cornea and lens.
	04.05 List the primary functions of the fibrous, vascular and sensory tunics of the eye.
	04.06 Discuss the origins and functions of the extraocular muscles.
	04.07 Describe ocular development during embryologic and fetal stages of gestation.
	04.08 Identify the cranial nerves associated with movement and sensation of the ocular structures.
	04.09 Describe the visual and pupillary pathways.
	04.10 Discuss the pupillary light reflex.
	04.11 Describe the process of accommodation.
05.0	Describe the clinical findings of common ocular pathology. The student will be able to:
	05.01 Discuss the principles of pathology.
	05.02 Discuss basic microbiology as it applies to the ocular structures.
	05.03 Differentiate between signs and symptoms of the ophthalmic patient.
	05.04 Differentiate between inflammation and infection.
	05.05 Identify disorders of the orbit.
	05.06 Identify benign and malignant lesions of the eyelids.
	05.07 List eyelid disorders due to malposition.
	05.08 Discuss disorders of the lacrimal system.
	05.09 Identify disorders of the conjunctiva and sclera.

	05.10 Describe abnormal findings of the cornea.
	05.11 Discuss intraocular inflammation of the iris and ciliary body.
	05.12 Describe cataractous changes in the crystalline lens.
	05.13 Discuss the ocular and visual changes associated with glaucoma.
	05.14 List the signs and symptoms related to macular disease.
	05.15 Discuss the retinal vascular changes associated with diabetes and cardiovascular disease.
06.0	Demonstrate knowledge of geometric and physiologic optics. The student will be able to:
	06.01 Discuss the visible spectrum and theories of visible light.
	06.02 Describe the processes of reflection, refraction and absorption of visible light.
	06.03 Discuss the index of refraction of different media.
	06.04 Describe the process of refraction through a prism and a lens.
	06.05 Identify the principle focal point and refraction of light rays through a plus or minus spherical lens.
	06.06 Calculate the focal length and dioptric power of a lens.
	06.07 Identify the principle focal lines and Conoid of Sturm of a spherocylinder lens.
	06.08 Discuss human refractive errors.
	06.09 Differentiate between simple, compound and mixed forms of astigmatism.
	06.10 Identify lenses used in the correction of refractive errors.
	06.11 Transpose prescriptions between plus and minus cylinder format.
	06.12 Calculate a spherical equivalent power of a spherocylinder lens.
07.0	Demonstrate clinical knowledge of ocular and systemic medications. The student will be able to:
	07.01 Describe methods of delivery of ophthalmic and systemic medications.
	07.02 Use accepted terminology and abbreviations related to pharmacology.
	07.03 List ophthalmic medications used in the general ophthalmic examination.

	07.04 Classify ophthalmic topical medications by the bottle top colors.
	07.05 List topical medications used in the treatment of glaucoma.
	07.06 Instill ophthalmic drops and ointments using proper technique.
	07.07 Identify potential allergic reactions and side effects of topical ophthalmic medications.
	07.08 Describe the mechanism of action of anti-VEGF medications used in the treatment of macular degeneration and diabetic retinopathy.
	07.09 Match common systemic disease processes with the medications used in the treatment of these diseases.
	07.10 List potential allergic reactions and ocular side effects of systemic medications.
08.0	Demonstrate the taking of an ocular and medical history. The student will be able to:
	08.01 Communicate effectively in written and oral communication.
	08.02 Document information in the written or electronic medical record using appropriate medical terminology and accepted abbreviations.
	08.03 Preserve patient confidentiality using HIPAA guidelines.
	08.04 Maintain applicable ethical and legal standards.
	08.05 Elicit the patient's chief complaint and history of present illness.
	08.06 Identify pertinent ocular and systemic history that could affect the patient's ocular health.
	08.07 Record ocular and systemic medicines.
	08.08 Obtain pertinent family history of ocular and systemic disease.
	08.09 Elicit the social history as it pertains to the ocular examination.
	08.10 Record patient allergies and allergic reactions to ocular and systemic medicines, environmental substances and seasonal allergens.
09.0	Demonstrate basic ophthalmic clinical skills. The student will be able to:
	09.01 Test and record the patient's level of visual acuity at distance and at near.
	09.02 Test and record the visual acuity level using a pinhole.
	09.03 Select non-traditional methods of visual acuity assessment for non-verbal, illiterate or non-English speaking patients.
	09.04 Identify methods of testing visual acuity on physically disabled patients or patients with nystagmus.

	09.05 Neutralize the patient's current spectacle correction by manual or automated lensometry.
	09.06 Measure and record the corneal surface refractive power by manual or automated keratometry.
	09.07 Assess the patient's color vision using Ishihara plates, Farnsworth D-15, or other color tests.
	09.08 Test and record the central visual field using an Amsler grid.
	09.09 Test and record the patient's visual field using confrontation testing.
	09.10 Perform formal visual field assessment using automated perimetry.
	09.11 Identify patient reliability errors and technician errors on the automated perimetry printout.
	09.12 Determine the binocular status of the patient using fusion and stereopsis testing.
	09.13 Assess the extraocular motility by version and duction testing.
	09.14 Qualify strabismic deviations by position.
	09.15 Differentiate between phoric and tropic deviations.
	09.16 Identify and measure extraocular muscle imbalances using prism and alternate cover or Maddox rod and prism testing.
	09.17 Estimate the ocular muscle deviation by corneal reflex positions using the Hirschberg or Krimsky methods.
	09.18 Assess and record the direct and consensual pupillary reactions to light and accommodation.
	09.19 Perform swinging flashlight test and identify afferent pupillary defects.
	09.20 Examine the ocular adnexa and record the findings.
	09.21 Instill topical anesthetic and dilating drops.
	09.22 Perform and record intraocular pressure measurements using Goldman applanation, Tonopen, or other methods of tonometry.
10.0	Demonstrate intermediate ophthalmic clinical skills. The student will be able to:
	10.01 Perform retinoscopy to estimate the patient's refractive error.
	10.02 Demonstrate refractometry techniques to obtain the best corrected visual acuity.
	10.03 Perform manifest and cycloplegic refractometry.
	10.04 Identify ground-in or induced prism using manual or automated lensometry.

	10.05 Determine add power required for near or intermediate tasks.
	10.06 Assess the anterior segment using the slit lamp biomicroscope.
	10.07 Perform axial length measurements using ultrasound and optical instruments.
	10.08 Calculate the intraocular lens power range in the pre-operative cataract evaluation.
	10.09 Perform optical imaging of the retina and optic nerve.
	10.10 Use digital or film cameras to obtain external, anterior segment or fundus images.
	10.11 Assist in fluorescein and ICG angiography.
	10.12 Identify phases of fluorescein angiography.
	10.13 Measure the corneal thickness by pachymetry.
	10.14 Map the corneal surfaces by corneal topography.
	10.15 Match diagnostic procedures used in evaluation and diagnosis with specific ocular disorders.
	10.16 Identify normal and abnormal findings in ophthalmic diagnostic testing printouts.
	10.17 Perform basic soft and rigid contact lens fitting.
	10.18 Identify pathology related to contact lens wear.
	10.19 Describe methods of patient education related to the care, wearing schedule and insertion/removal of contact lenses.
11.0	Demonstrate knowledge of ophthalmic surgical procedures. The student will be able to:
	11.01 Identify minor surgery procedures performed in the ophthalmic clinical setting.
	11.02 Describe surgical procedures commonly performed on the orbits, lacrimal system and eyelids.
	11.03 List procedures performed for correction of strabismus.
	11.04 Identify and describe refractive surgical procedures.
	11.05 Differentiate between full thickness and lamellar corneal transplantation.
	11.06 Discuss the methods of cataract extraction.
	11.07 Classify intraocular lens implants used after cataract extraction.

	11.08 Identify laser and surgical procedures performed as treatment for glaucoma.
	11.09 Discuss methods of removing the vitreous.
	11.10 Describe retinal and macular surgical procedures.
	11.11 Apply proper sterile technique in the minor procedure or surgical suite.
	11.12 Describe proper assisting techniques in minor procedure or surgical cases.
12.0	Discuss patient services provided or by the ophthalmic technician. The student will be able to:
	12.01 Demonstrate proper technique of placing a pressure or non-pressure eye patch.
	12.02 Demonstrate patient education of ocular and systemic disease processes.
	12.03 Inform the patient of required testing, the interpreted test results, and treatment options for ophthalmic disease processes.
	12.04 Counsel the patients on proper use of medications.
	12.05 Instill ocular medications using proper technique.
	12.06 Discuss triage procedures for ocular emergencies.
	12.07 Identify resources available for the patient with subnormal vision.
	12.08 Instruct patient is the use of optical and non-optical low vision devices.
	12.09 Instruct the patient on the insertion, removal and care of contact lenses.
13.0	Demonstrate office safety and maintenance. The student will be able to:
	13.01 Identify environmental and electrical safety procedures in the clinical practice.
	13.02 Replace instrument bulbs and fuses employing proper technique and safety standards.
	13.03 Discuss methods of instrument cleaning and maintenance.
	13.04 Maintain clinical supply inventory.
	13.05 Discuss proper disposal of hazardous and bio-medical waste.
	13.06 Describe the principles of infection control and standard universal precautions.
	13.07 Maintain aseptic technique in the clinical and surgical setting.

	13.08 Identify potential safety hazards in the physical space.
14.0	Demonstrate knowledge of patient vital signs and reactions. The student will be able to:
	14.01 Perform cardiopulmonary resuscitation in a clinical setting.
	14.02 Measure and record blood pressure.
	14.03 Measure and record patient temperature.
	14.04 Assess patient respiration.
	14.05 Recognize patient allergic response in the clinical setting.
15.0	Demonstrate advanced clinical skills. The student will be able to:
	15.01 Assess visual ability in low vision patients.
	15.02 Calculate magnification needed for optical aids used in low vision.
	15.03 Identify optical low vision aids.
	15.04 Identify paralytic extraocular muscle using the three-step test.
	15.05 Assess and record head and posture abnormalities.
	15.06 Perform fusional amplitudes.
	15.07 Demonstrate use of direct ophthalmoscopy.
	15.08 Perform advanced ocular imaging procedures.
	15.09 Determine prism addition in spectacle correction.
	15.10 Calculate induced prism using Prentice’s formula.
	15.11 Perform specialty contact lens fitting.
	15.12 Perform ophthalmic electrophysiology testing.
	15.13 Demonstrate clinical supervision skills.
	15.14 Demonstrate clinical training techniques.

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as, experimental, quality, and safety procedures are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate and troubleshoot equipment/tools used to make observations. Students understand measurement error; and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

Clinical education has been established for students in this program to permit accurate assessment of the knowledge, skills, and abilities of students in the clinical component of the program. After completion of the prerequisite practice of ophthalmic assisting procedures, students indicate to the faculty their readiness for evaluation of competence in a specific competency category/procedure.

Multiple affiliates are utilized for the clinical activities which provide equitable opportunities for the student to achieve the program clinical objectives. The resulting clinical rotations provide students with the technical skills for the ophthalmic medical technician.

Special Notes

The program is designed to provide the medical community of ophthalmology with workers who, under the supervision of an ophthalmologist, aid in the treatment of eye conditions and diseases. The curriculum provides students an opportunity to develop technical and social skills through experiences in the clinic, classroom, and laboratory.

The Health Careers Core must be taken by all students first (secondary, postsecondary adult and postsecondary vocational) planning to complete any Health Occupations program. Once successfully completed, the core does not need to be repeated at any instructional level.

General Education Course Requirements for AS and AAS Degrees

State Board of Education Rule 6A-14.030(4), F.A.C., identifies 15 credit hours as the minimum amount of general education coursework required in the Associate of Science (AS) degree and the Associate of Applied Science (AAS) degree. In addition, Rule 6A-14.0303, F.A.C., implements s. 1007.25, F.S., and requires students entering a technical education degree program in the 2022-2023 academic year, and thereafter, to complete at least one identified core course in each subject area as part of the general education course requirements (15 credit hours total) before a degree is awarded) The core subject areas include:

- Communication.
- Humanities.
- Mathematics.
- Natural Sciences.
- Social Sciences.

Career and Technical Student Organization (CTSO)

CTSOs are co-curricular career and technical student organizations providing leadership training and reinforcing specific career and technical skills. Career and Technical Student Organizations provide activities for students as an integral part of the instruction offered. Other CTSOs not listed in this curriculum framework or recognized by the Florida Department of Education are permissible provided they support student mastery over the standards and benchmarks of this curriculum framework.

Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

Florida Department of Education
Curriculum Framework

The standards and benchmarks for this program were updated for the 2026-27 academic year.

Program Title: **Health Navigator**
Career Cluster: **Health Science**

Associate in Science	
CIP Number	1351220800
Program Type	College Credit
Program Length	60 credit hours
CTSO	HOSA
SOC Codes (all applicable)	For program SOC codes, please see the Program and Course Tables section of the CTE Program Resources page linked below.
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml

Purpose

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Health Science career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of the Health Science career cluster.

The purpose of this program is to prepare students for employment as Health Navigators, Benefits Navigators, Community Service Specialists, or to provide supplemental training for persons previously or currently employed in these occupations.

The content includes but is not limited to communication skills, leadership skills, human relations and employability skills, principles of health insurance, introduction to computer literacy, health care organization, medical ethics, legal aspects, and advanced technical skills in a chosen health-related profession, health and safety.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Program Structure

This program is a planned sequence of instruction consisting of 60 credit hours.

When developing the course sequence for the local implementation of this program, select courses that:

- Meet the skill development requirements of the standards and benchmarks of this program.
- Meet the general education core course requirements of Rule 6A-14.0303, Florida Administrative Code.
- Where reasonable and practicable, align with programs offered by your institution or other postsecondary institutions in Florida, including:
    - Related CCC and ATD credentials.
    - Baccalaureate degrees within the same career pathway and/or Federal CIP code.

Visit FloridaShines' Discover Programs website to identify other institutions that offer similar programs to review their course sequencing. Where appropriate, course alignment between institutions offering related programs can facilitate interagency student articulation.

Visit FloridaShines' Common Prerequisites Manual to identify courses that are prerequisites for admission into an upper division program. When sub-baccalaureate courses are aligned to the course admissions requirements of baccalaureate programs with the same career pathway, students can enter upper division coursework seamlessly.

Florida's Career Readiness Skills for CTE Programs

Employability Skills	
01.0	Apply academic skills to workplace scenarios.
	01.01 Use reading skills.
	01.02 Use writing skills.
	01.03 Use mathematical strategies and procedures.
	01.04 Use scientific principles and procedures.
02.0	Design a solution to an industry problem.
	02.01 Use critical thinking.
	02.02 Use creativity.
	02.03 Make sound decisions.
	02.04 Solve problems.
	02.05 Reason.
	02.06 Plan and organize.
03.0	Manage resources within an industry project
	03.01 Manage time.
	03.02 Manage money or resources.
	03.03 Manage materials.
	03.04 Manage personnel.
04.0	Oversee the subcomponents, operations and output of a technical or organizational system.
	04.01 Manage systems.
	04.02 Monitor systems.
	04.03 Improve systems.
05.0	Use information for decision making.
	05.01 Locate information.
	05.02 Organize information.
	05.03 Use information.

	05.04 Analyze information.
	05.05 Communicate information.
06.0	Apply relevant technology to workplace scenarios to aid productivity.
	06.01 Use technology.
07.0	Interpret and express interpersonal communication.
	07.01 Communicate verbally.
	07.02 Listen actively.
	07.03 Comprehend written material.
	07.04 Convey information in writing.
	07.05 Communicate nonverbally.
	07.06 Interpret nonverbal communication.
08.0	Interact with others to accomplish workplace goals.
	08.01 Collaborate with others in a team.
	08.02 Respond to customer needs.
	08.03 Exercise leadership.
	08.04 Negotiate to resolve conflict.
	08.05 Respect others.
09.0	Manage personal behavior to maximize productivity and professional growth.
	09.01 Demonstrate responsibility and self-discipline.
	09.02 Adapt and show flexibility.
	09.03 Work independently.
	09.04 Demonstrate a willingness to learn.
	09.05 Demonstrate integrity.
	09.06 Demonstrate professionalism.
	09.07 Take initiative.
	09.08 Display positive attitude.
	09.09 Take responsibility for professional growth.

Job Attainment	
10.0	Find, assess and apply to job opportunities.
	10.01 Identify online job posts relevant to his or her career aspirations.
	10.02 Compare and contrast the job posts' required qualifications, job duties, compensation, benefits and employers.
	10.03 Define what information, documentation and writing prompts are required for the positions.
11.0	Communicate personal competence, character and fit for a job opportunity.
	11.01 Develop a resume.
	11.02 Write a cover letter.
	11.03 Curate a professional portfolio that includes work products.
	11.04 Prepare for and experience a mock job interview.
12.0	Cultivate and leverage relationships to professionally advance.
	12.01 Request a signed reference letter, letter of recommendation and/or an online skill/professionalism endorsement.
	12.02 Develop a plan to cultivate a professional digital footprint.
	12.03 Develop a networking plan for a specific industry of interest.

Standards

After successfully completing this program, the student will be able to perform the following:

01.0 Demonstrate computer literacy with emphasis on current and emerging technology and the implications for and the effects on our health, wellness, and society.
02.0 Demonstrate knowledge of practical methods of speech composition, organizational patterns, and presentation.
03.0 Demonstrate basic knowledge of medical terminology, anatomy, and physiology.
04.0 Demonstrate knowledge of the major ethical theories in philosophy and how they relate to clinical care.
05.0 Demonstrate knowledge of the use of scientific methods in measuring and examining societal factors.
06.0 Meet requirements for cardiopulmonary resuscitation (CPR) certification.
07.0 Demonstrate knowledge of modern scientific psychology and its application to human behavior.
08.0 Demonstrate knowledge of the basic concepts of statistical design and data analysis.
09.0 Identify and apply basic knowledge of aspects of health and wellness.
10.0 Demonstrate knowledge of various topics pertinent to the five core disciplines of public health.
11.0 Identify and apply knowledge of the U.S. healthcare delivery and fiscal resources.
12.0 Demonstrate ability to work as a health navigator or community health worker.
13.0 Demonstrate knowledge of current events in the field of public health.
14.0 Demonstrate knowledge of health communication and its impact on health outcomes.
15.0 Define and describe aging, long-term care, and types of residences.
16.0 Demonstrate the use of evidence to draw conclusions about disease etiology.
17.0 Demonstrate knowledge of the three primary levels of prevention.
18.0 Demonstrate knowledge of how the insured and uninsured interact with the U.S. healthcare system.

Florida Department of Education
Student Performance Standards

Program Title: **Health Navigator**
CIP Number: **1351220800**
Program Length: **60 credit hours**

At the completion of this program, the student will be able to:	
01.0	Demonstrate computer literacy with emphasis on current and emerging technology and the implications for and the effects on our health, wellness, and society. The student will be able to:
01.01	Define online communications, including the impact of the Internet as it pertains to ethics, legal, privacy, environmental, and health-related issues.
01.02	Describe the use of online communications, including the impact of the Internet as it pertains to ethics, legal, privacy, environmental, and health-related issues.
02.0	Demonstrate knowledge of practical methods of speech composition, organizational patterns, and presentation. The student will be able to:
02.01	Design and deliver a professional presentation that effectively communicates key messages, engages the audience, and utilizes appropriate visual aids and technology to enhance understanding.
02.02	Describe how to effectively organize, aggregate, and present information.
03.0	Demonstrate basic knowledge of medical terminology, anatomy, and physiology. The student will be able to:
03.01	Define, describe, and discuss anatomic names and descriptive terms of the body.
03.02	Demonstrate an understanding of basic patient discharge and transfer procedures.
03.03	Describe common abbreviations and commonly used medical terms and their proper usage.
04.0	Demonstrate knowledge of the major ethical theories in philosophy and how they relate to clinical care. The student will be able to:
04.01	Define ethical theories in philosophy and how they are used in evaluating contemporary issues in health care.
04.02	Describe applications of ethical codes.
04.03	Explain variations in ethical standards across healthcare.
04.04	Explain the ethical considerations of artificial intelligence (AI) technologies in research, data collection and analysis, health care delivery and documentation, and individual healthcare decisions.
04.05	Recognize and report various forms of abuse (e.g., trafficking, domestic violence, and neglect).
04.06	Identify evidence-based prevention strategies and interventions for victims of abuse.

05.0	Demonstrate knowledge of the use of scientific methods in measuring and examining societal factors. The student will be able to:
05.01	Define and discuss societal group structures.
05.02	Define and discuss socialization, social stratification, and social roles.
05.03	Explain societal influences and behaviors, factors that influence population density, and the impact of international health policies.
05.04	Identify and describe safety principles in the online environment for privacy and security of patient medical information and organizational processes.
06.0	Meet requirements for cardiopulmonary resuscitation (CPR) certification. The student will be able to:
06.01	Demonstrate knowledge and skills necessary to perform CPR in an emergency to help sustain life, minimize injury, and mitigate consequences until professional medical help arrives.
07.0	Demonstrate knowledge of modern scientific psychology and its application to human behavior. The student will be able to:
07.01	Discuss personality development.
07.02	Define perception, motivation, learning, thinking, and remembering.
07.03	Describe how observation, experimentation, and analysis are used in modern psychology.
07.04	Explain emotion and how it impacts perception.
07.05	Define the types of intelligence and describe how they are measured.
07.06	Define cognition and how information is input, stored, and retrieved.
08.0	Demonstrate knowledge of the basic concepts of statistical design and data analysis: The student will be able to:
08.01	Discuss descriptive and inferential statistics.
08.02	Describe data organization and analysis, probability, discrete and continuous probability distributions, confidence intervals, hypothesis testing, correlation, and simple linear regression.
08.03	Describe when to use inferential, descriptive, or probability statistics.
08.04	Define basic statistics, including mean, median, mode, and variance.
09.0	Identify and apply basic knowledge of aspects of health and wellness. The student will be able to:
09.01	Discuss integrating healthy living choices into one’s lifestyle.
09.02	Define how physical fitness, mental health, nutrition, substance use and abuse, and family influences connect with the concept of patient wellness.

	09.03 Describe the impact of social media and time in the digital environment on physical and mental health and wellness.
	09.04 Identify the risk factors for cardiovascular disease.
	09.05 Describe the effects of tobacco, smoking, and vaping.
	09.06 Describe various fitness methods to improve health.
	09.07 Discuss the effects of nutritional impacts on health and wellness.
	09.08 Explain body composition and achieving a healthy weight.
	09.09 Describe the types of stress, its impacts on health and wellness, and stress management strategies.
	09.10 Discuss substance use and abuse in society.
	09.11 Describe the effects of chronic disease on the human body.
10.0	Demonstrate knowledge of various topics pertinent to the five core disciplines of public health. The student will be able to:
	10.01 Define public health.
	10.02 Describe how public health strategies and practices contribute to achieving local, state, and national health objectives.
	10.03 Summarize the historical milestones in public health.
	10.04 Identify and describe the following five core disciplines of public health: epidemiology/biostatistics, community/family health, environmental/occupational health, health policy/management, and global health.
	10.05 Identify elements of public health.
	10.06 Explain the concepts of prevention, detection, control of infectious and chronic conditions, and the factors that contribute to differences in population-level health indicators.
	10.07 Compare and contrast examples of major domestic and international public health issues.
11.0	Identify and apply knowledge of the U.S. health care delivery and fiscal resources. The student will be able to:
	11.01 Describe the changing landscape of health services and their relevance on the existing healthcare system, facilities, and services.
	11.02 Explain the impacts of public policies on healthcare, such as availability of healthcare services, cost, delivery, and financial implications.
	11.03 Describe the various health care organizations and service delivery options.
	11.04 Identify the health professions and explain the role of each and their licensing/educational requirements.

	11.05 Compare and contrast the health care delivery systems of the U.S. with other countries.
	11.06 Describe the array of healthcare career options.
	11.07 Discuss the various sources and uses of funds for healthcare.
12.0	Demonstrate ability to work as a health navigator or community health worker. The student will be able to:
	12.01 Identify community agencies where health navigators are employed.
	12.02 Complete a field experience that provides descriptions of primary duties, annual salary, and interpersonal collaboration.
	12.03 Demonstrate an understanding and expectation of the essential duties of health navigators.
	12.04 Describe barriers to care faced by healthcare providers, patients, and consumers of the placement site.
	12.05 Discuss the core health activities of the placement site.
	12.06 Demonstrate an understanding of how placement sites work with local, county, state, and federal agencies.
	12.07 Evaluate the role of a health navigator in patient health care.
	12.08 Demonstrate communication techniques to assess patient health and needs.
	12.09 Apply health literacy principles and adapt instruction and training, as appropriate, to patients, groups, and populations.
13.0	Demonstrate knowledge of current events in the field of public health. The student will be able to:
	13.01 Identify sources and platforms (e.g., news, media, and governmental) used to communicate public health events to the general public.
	13.02 Describe the implications of current events on public health.
	13.03 Discuss concerns related to how public health information is presented to the public.
	13.04 Recognize how reporting of global events (e.g., epidemics, regime change, and weather events) has the potential to impact other areas.
	13.05 Locate emerging public health trends.
	13.06 Explain the etiology of emerging public health trends discussed throughout the course.
	13.07 Discuss legislation designed to protect the public's right to information during major health events (epidemics, terrorism, natural disasters).
14.0	Demonstrate knowledge of health communication and its impact on health outcomes. The student will be able to:

	14.01 Describe key concepts and skills used to identify and measure individuals with reduced health literacy.
	14.02 Explain how understanding health literacy is a determinant of health.
	14.03 Advocate for patients, ensuring that their voices are heard and respected in the healthcare decision-making process.
	14.04 Discuss basic constructs of theories used in behavior change and persuasion.
	14.05 Classify health communication programs based on disease type (e.g., chronic vs. infectious).
	14.06 Determine communication methods to be used in specific settings (e.g., health care, school, and workplace).
	14.07 Discuss risks and rewards associated with the use of technology-based applications in healthcare.
15.0	Define and describe aging, long-term care, and types of residences. The student will be able to:
	15.01 Describe demographic characteristics of an aging population.
	15.02 Explain psychological factors associated with aging.
	15.03 Describe the phenomenon of increasing life expectancy and the impact on the U.S. healthcare system, economy, and society.
	15.04 Discuss health promotion, prevention, and end-of-life planning for aging populations.
	15.05 Compare and contrast aging populations from a historical perspective.
	15.06 Describe the levels of care and types of residences for different health needs.
16.0	Demonstrate the use of evidence to draw conclusions about disease etiology. The student will be able to:
	16.01 Define evidence-based practices in public health.
	16.02 Identify evidence-based practices in disease etiology, the benefits, and recommendations for prevention.
	16.03 Discuss health information concepts related to economic, legal, and social issues.
	16.04 Investigate a problem by using evidence-based practice skills to define a health problem and determine the information that is needed to make an educated decision.
	16.05 Locate and evaluate online health information to determine that appropriate audiences are reached using content that is patient-specific.
17.0	Demonstrate knowledge of the three primary levels of prevention. The student will be able to:
	17.01 Discuss implementation methods of prevention used in public health, including education, motivation, and obligation.

	17.02 Describe the three levels of prevention in public health, including primary, secondary, and tertiary.
	17.03 Explain how preventative methods can be used throughout the lifespan.
	17.04 Identify individual and community needs to connect available resources to distressed areas and prevent adverse effects.
	17.05 Summarize specific primary prevention methods, including vaccinations, exercise, nutrition counseling, and birth control.
	17.06 Summarize secondary prevention methods, including screening for risk factors of disease and injury prevention.
	17.07 Summarize specific tertiary prevention methods, including treatment to control symptoms and prevent complications.
18.0	Demonstrate knowledge of how the insured and uninsured interact with the U.S. health care system. The student will be able to:
	18.01 Identify types of health insurance (e.g., Medicaid, Medicare, Medigap, exchanges, and employment-based).
	18.02 Accurately describe the history, advantages, and disadvantages of the development of the U.S. health care system.
	18.03 Explain the relationship between essential services (e.g., preventive care, emergency care, choice of providers, institutional options, prescription drug options, and coverage decisions).
	18.04 Describe issues associated with having access to healthcare in the absence of health insurance and consequences of the decision not to obtain health insurance.
	18.05 Explain goals, limitations, and basic guidelines for eligibility for workers' compensation.
	18.06 Discuss the economic implications related to access and affordability of healthcare coverage.

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as experimental, quality, and safety procedures are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate, and troubleshoot equipment/tools used to make observations. Students understand measurement error and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

General Education Course Requirements for AS and AAS Degrees

State Board of Education Rule 6A-14.030(4), F.A.C., identifies 15 credit hours as the minimum amount of general education coursework required in the Associate of Science (AS) degree and the Associate of Applied Science (AAS) degree. In addition, Rule 6A-14.0303, F.A.C., implements s. 1007.25, F.S., and requires students entering a technical education degree program in the 2022-2023 academic year, and thereafter, to complete at least one identified core course in each subject area as part of the general education course requirements (15 credit hours total) before a degree is awarded. The core subject areas include:

- Communication.
- Humanities.
- Mathematics.
- Natural Sciences.
- Social Sciences.

Career and Technical Student Organization (CTSO)

CTSOs are co-curricular career and technical student organizations providing leadership training and reinforcing specific career and technical skills. Career and Technical Student Organizations provide activities for students as an integral part of the instruction offered. Other CTSOs not listed in this curriculum framework or recognized by the Florida Department of Education are permissible provided they support student mastery over the standards and benchmarks of this curriculum framework.

Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

Certificate Programs

A College Credit Certificate consists of a program of instruction of less than sixty (60) credits of college-level courses, which is part of an AS or AAS degree program and prepares students for entry into employment (Rule 6A-14.030, F.A.C.). This AS degree program includes the following College Credit Certificates:

Health Navigator Specialist (0351220800) - 31 credit hours

Standards for the above certificate programs are contained in separate curriculum frameworks.

Florida Department of Education
Curriculum Framework

Program Title: **Orthotics & Prosthetics Technology**
Career Cluster: **Health Science**

Associate in Science	
CIP Number	1351230703
Program Type	College Credit
Program Length	60 credit hours
CTSO	HOSA
SOC Codes (all applicable)	For program SOC codes, please see the Program and Course Tables section of the CTE Program Resources page linked below.
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml

Purpose

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Health Science career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of Health Science career cluster.

This program is designed to prepare students for employment as Orthotic and Prosthetic Technicians (Medical Appliance Technicians).

The content includes, but is not limited to, human anatomy and physiology, biomechanics and kinesiology, material science, orthotic and prosthetic fabrication, safety procedures, CAD/CAM, and clinical pathologies.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Program Structure

This program is a planned sequence of instruction consisting of 60 credit hours.

When developing the course sequence for the local implementation of this program, select courses that:

- Meet the skill development requirements of the standards and benchmarks of this program.
- Meet the general education core course requirements of Rule 6A-14.0303, Florida Administrative Code.

- Where reasonable and practicable, align with programs offered by your institution or other postsecondary institutions in Florida, including:
    - Related CCC and ATD credentials.
    - Baccalaureate degrees within the same career pathway and/or Federal CIP code.

Visit FloridaShines' Discover Programs website to identify other institutions that offer similar programs to review their course sequencing. Where appropriate, course alignment between institutions offering related programs can facilitate interagency student articulation.

Visit FloridaShines' Common Prerequisites Manual to identify courses that are prerequisites for admission into an upper division program. When sub-baccalaureate courses are aligned to the course admissions requirements of baccalaureate programs with the same career pathway, students can enter upper division coursework seamlessly.

Florida's Career Readiness Skills for CTE Programs

Employability Skills	
01.0	Apply academic skills to workplace scenarios.
01.01	Use reading skills.
01.02	Use writing skills.
01.03	Use mathematical strategies and procedures.
01.04	Use scientific principles and procedures.
02.0	Design a solution to an industry problem.
02.01	Use critical thinking.
02.02	Use creativity.
02.03	Make sound decisions.
02.04	Solve problems.
02.05	Reason.
02.06	Plan and organize.
03.0	Manage resources within an industry project
03.01	Manage time.
03.02	Manage money or resources.
03.03	Manage materials.
03.04	Manage personnel.
04.0	Oversee the subcomponents, operations and output of a technical or organizational system.
04.01	Manage systems.
04.02	Monitor systems.
04.03	Improve systems.
05.0	Use information for decision making.
05.01	Locate information.
05.02	Organize information.
05.03	Use information.

	05.04 Analyze information.
	05.05 Communicate information.
06.0	Apply relevant technology to workplace scenarios to aid productivity.
	06.01 Use technology.
07.0	Interpret and express interpersonal communication.
	07.01 Communicate verbally.
	07.02 Listen actively.
	07.03 Comprehend written material.
	07.04 Convey information in writing.
	07.05 Communicate nonverbally.
	07.06 Interpret nonverbal communication.
08.0	Interact with others to accomplish workplace goals.
	08.01 Collaborate with others in a team.
	08.02 Respond to customer needs.
	08.03 Exercise leadership.
	08.04 Negotiate to resolve conflict.
	08.05 Respect others.
09.0	Manage personal behavior to maximize productivity and professional growth.
	09.01 Demonstrate responsibility and self-discipline.
	09.02 Adapt and show flexibility.
	09.03 Work independently.
	09.04 Demonstrate a willingness to learn.
	09.05 Demonstrate integrity.
	09.06 Demonstrate professionalism.
	09.07 Take initiative.
	09.08 Display positive attitude.
	09.09 Take responsibility for professional growth.

Job Attainment	
10.0	Find, assess and apply to job opportunities.
10.01	Identify online job posts relevant to his or her career aspirations.
10.02	Compare and contrast the job posts' required qualifications, job duties, compensation, benefits and employers.
10.03	Define what information, documentation and writing prompts are required for the positions.
11.0	Communicate personal competence, character and fit for a job opportunity.
11.01	Develop a resume.
11.02	Write a cover letter.
11.03	Curate a professional portfolio that includes work products.
11.04	Prepare for and experience a mock job interview.
12.0	Cultivate and leverage relationships to professionally advance.
12.01	Request a signed reference letter, letter of recommendation and/or an online skill/professionalism endorsement.
12.02	Develop a plan to cultivate a professional digital footprint.
12.03	Develop a networking plan for a specific industry of interest.

Standards

After successfully completing this program, the student will be able to perform the following:

01.0 Discuss and understand the role and responsibilities of an orthotic and prosthetic technician.
02.0 Discuss and describe an overview of the human body, including organization and chemical process.
03.0 Demonstrate knowledge and use medical terminology integral to Orthotics and Prosthetic technology.
04.0 Demonstrate knowledge of foot orthoses.
05.0 Demonstrate knowledge of UCBL foot orthoses.
06.0 Demonstrate knowledge of Ankle Foot Orthoses (AFO).
07.0 Demonstrate knowledge of Knee-Ankle-Foot Orthoses (KAFO).
08.0 Demonstrate knowledge of Hip-Knee-Ankle-Foot Orthoses (HKAFO), Standing Frames/Parapodiums.
09.0 Demonstrate knowledge of Knee Orthoses (KO) and Hip Orthoses.
10.0 Demonstrate the knowledge of Hand Orthoses and Wrist-Hand Orthoses
11.0 Demonstrate knowledge of Elbow Orthoses Shoulder-Elbow-Wrist-Hand (SEWH) and Fracture Orthoses.
12.0 Demonstrate knowledge of Lumbo-Sacral Orthoses (LSO), Thoraco-Lumbo-Sacral Orthoses (TLSO) and Cervico-Thoraco-Lumbo-Sacral Orthoses (CTLSO).
13.0 Demonstrate knowledge of Partial Foot Prostheses.
14.0 Demonstrate knowledge of Syme Prostheses.
15.0 Demonstrate knowledge of Transtibial Prostheses.
16.0 Demonstrate knowledge of Transfemoral Prostheses.
17.0 Demonstrate knowledge of Knee Disarticulation and Hip Disarticulation/Hemipelvectomy Prostheses.
18.0 Demonstrate knowledge of Transradial Prostheses.
19.0 Demonstrate knowledge of Transhumeral Prostheses.

Florida Department of Education
Student Performance Standards

Program Title: **Orthotics & Prosthetics Technology**
CIP Number: **1351230703**
Program Length: **60 credit hours**

At the completion of this program, the student will be able to:	
01.0	Discuss and understand the role and responsibilities of an Orthotic and Prosthetic Technician. The student will be able to:
01.01	Explain the role of the orthotic and prosthetic technician in providing ethical patient-centered care in technical support of patients.
01.02	Demonstrate knowledge of professional responsibilities of the orthotic and prosthetic technician to the orthotic and prosthetic workflow as well as to promotion of the field.
01.03	Demonstrate understanding of the governing statutes and ethical considerations of the role of the technician, support personnel, and those holding certificates and/or licensure in any orthotic and prosthetic profession.
01.04	Demonstrate understanding of safety procedures throughout fabrication, delivers, and maintenance of all orthotic and/or prosthetic services.
01.05	Demonstrate knowledge of safety organizations and governing bodies including, but not limited to, OSHA, The Joint Commission, and HIPPA.
01.06	Discuss the importance of professional development including continuing education, promotion of public awareness of the orthotic and prosthetic profession and involvement in professional organizations.
02.0	Discuss and describe an overview of the human body, including organization and chemical process. The student will be able to:
02.01	Demonstrate an understanding of the interrelationships of the structure of the human body and the specific functions of its cells, tissues, organs and organ systems.
02.02	Demonstrate knowledge of the basic principles of chemistry that govern the normal maintenance of homeostasis.
02.03	Demonstrate understanding of the malfunction of homeostatic mechanisms in response to stress and/or disorders in the human body.
03.0	Demonstrate knowledge and use medical terminology integral to Orthotics and Prosthetic Technology. The student will be able to:
03.01	Define the meaning of prefixes, suffixes, word roots and combining forms used in analyzing and defining medical terms.
03.02	Correctly spell and/or pronounce medical terms and abbreviations essential to the practice of Orthotics and Prosthetics.
04.0	Demonstrate knowledge of foot orthoses. The student will be able to:
04.01	Demonstrate knowledge of current materials used in the fabrication of hard and soft foot orthoses.

	04.02 Understand the difference between corrective and accommodative foot orthoses.
	04.03 Demonstrate knowledge and skill to prepare positive models for foot orthoses (category I and II modifications only*).
	04.04 Demonstrate skill to form materials to fabricate hard and soft orthoses.
	04.05 Demonstrate knowledge and skill of modifications of foot orthoses.
	04.06 Demonstrate knowledge and skill to correctly fit foot orthoses into shoes including corrections for heel height.
	04.07 Demonstrate knowledge of shoe modification.
	04.08 Demonstrate knowledge of anatomy and biomechanics of the normal and pathological foot.
05.0	Demonstrate knowledge of UCBL foot orthoses. The student will be able to:
	05.01 Demonstrate knowledge of the bony landmarks and pressure tolerant areas of the foot.
	05.02 Demonstrate knowledge to locate the medial, lateral, and transverse arches of the foot.
	05.03 Demonstrate knowledge and skill to prepare a positive UCBL model for fabrication (category I and II modifications only*).
	05.04 Demonstrate knowledge of materials used to fabricate UCBL orthoses.
	05.05 Demonstrate knowledge and skill in the processes used to fabricate UCBL orthoses including medial posting and trim lines.
06.0	Demonstrate knowledge of Ankle Foot Orthoses (AFO). -- The student will be able to:
	06.01 Demonstrate knowledge of the following AFO designs: • Posterior leaf spring/flexible ankle • Thermoplastic solid ankle • Axial resisting • CROW/neuropathic walker • Metal • Dorsiflexion assist articulated • Dorsiflexion stop articulated • Plantarflexion resist articulated • Plantarflexion stop articulated • Limited motion articulated • Hybrid • Padded anterior shell • Molded inner boot

	06.02 Demonstrate the skills to fabricate: • A thermoplastic AFO • A metal AFO with attached shoe • An articulated plastic AFO with self-aligning joints (Tamarack) • An articulated plastic AFO without self-aligning joins (Oklahoma) • Heel posts • Various strapping configurations • A plastic AFO with modification for varus and/or valgus ankle control
	06.03 Demonstrate knowledge of components for various AFOs.
	06.04 Demonstrate the knowledge and skills to correct a paper tracing to accommodate fixed or flexible deformities of the ankle.
	06.05 Demonstrate knowledge and skill in making angular changes to a negative model in the sagittal plane, only under a practitioner's instruction (i.e., set ankle at 3 degrees of dorsiflexion).
	06.06 Demonstrate knowledge and skill to prepare positive models for fabrication of AFOs (category I and II modifications only*).
	06.07 Demonstrate knowledge of anatomy and biomechanics of the normal and pathological foot and ankle.
07.0	Demonstrate knowledge of Knee-Ankle-Foot Orthoses (KAFO). The student will be able to:
	07.01 Demonstrate knowledge of the following KAFO designs: • Metal • Plastic • Hybrid • Stance Control • Axial resisting • Fracture
	07.02 Demonstrate the skills to fabricate: • A metal KAFO • A plastic/metal (hybrid) KAFO
	07.03 Demonstrate knowledge of components for coronal, sagittal and transverse plane control.
	07.04 Demonstrate the knowledge and skills to correct a lower limb tracing for a KAFO.
	07.05 Demonstrate knowledge and skill in making angular changes to a negative model in the sagittal plane, only under a practitioner's instruction (i.e. set knee in 3 degrees of flexion).
	07.06 Demonstrate skill to prepare a lower limb positive model for fabrication of a KAFO (category I and II modifications only*).
	07.07 Demonstrate skill to incorporate tibial torsion into a metal KAFO.
	07.08 Demonstrate knowledge of anatomy and biomechanics of the normal and pathological knee.

08.0	Demonstrate knowledge of Hip-Knee-Ankle-Foot Orthoses (HKAFO), Standing Frames/Parapodiums. The student will be able to:
	08.01 Demonstrate knowledge of the following HKAFO and standing frame designs: • Standing frames and parapodiums • Reciprocating gait orthoses • Metal HKAFO designs • Plastic HKAFO designs
	08.02 Demonstrate knowledge of components for various HKAFO designs.
	08.03 Demonstrate knowledge of hip joint placement.
	08.04 Demonstrate knowledge of tracing correction principles for fabrication of HKAFOs.
	08.05 Demonstrate knowledge of spinal control devices that may be incorporated in HKAFO designs.
	08.06 Demonstrate knowledge of anatomy and biomechanics of the normal and pathological hip.
09.0	Demonstrate knowledge of Knee Orthoses (KO) and Hip Orthoses. The student will be able to:
	09.01 Demonstrate knowledge of custom and prefabricated KO designs and principles.
	09.02 Demonstrate knowledge pediatric hip control orthoses.
	09.03 Demonstrate knowledge of post-surgical/trauma hip control orthoses.
10.0	Demonstrate the knowledge of Hand Orthoses and Wrist-Hand Orthoses. The student will be able to:
	10.01 Demonstrate knowledge and skill to fabricate plastic and/or metal hand orthosis and wrist- hand orthoses.
	10.02 Demonstrate knowledge and skill to prepare positive models (category I and II modifications only*).
	10.03 Demonstrate knowledge of anatomy and biomechanics of the normal and pathological hand and wrist.
11.0	Demonstrate knowledge of Elbow Orthoses Shoulder-Elbow-Wrist-Hand (SEWH) and Fracture Orthoses. The student will be able to:
	11.01 Demonstrate knowledge of Elbow orthoses.
	11.02 Demonstrate knowledge of SEWH orthoses.
	11.03 Demonstrate knowledge of various upper extremity orthoses for fracture management.
	11.04 Demonstrate knowledge of anatomy and biomechanics of the normal and pathological elbow.
12.0	Demonstrate knowledge of Lumbo-Sacral Orthoses (LSO), Thoraco-Lumbo-Sacral Orthoses (TLSO) and Cervico-Thoraco-Lumbo-Sacral Orthoses (CTLSO). The student will be able to:

	12.01 Demonstrate knowledge of metal and plastic LSO and TLSO designs.
	12.02 Demonstrate skills to fabricate metal LSO or TLSO spinal orthoses designs.
	12.03 Demonstrate skills to fabricate plastic bi-valve TLSO or LSO spinal orthoses designs.
	12.04 Demonstrate skills to fabricate scoliosis TLSO designs.
	12.05 Demonstrate knowledge and skill to prepare positive models for spinal orthoses (category I and II modifications only*).
	12.06 Demonstrate knowledge of metal and plastic CTLSO designs and principles.
	12.07 Demonstrate knowledge of anatomy and biomechanics of the normal and pathological spine.
13.0	Demonstrate knowledge of Partial Foot Prostheses. The student will be able to:
	13.01 Demonstrate knowledge of designs and principles for partial foot prostheses.
	13.02 Demonstrate knowledge of current materials used in the fabrication of partial foot prostheses.
	13.03 Demonstrate skill to form materials to fabricate partial foot prostheses.
	13.04 Demonstrate knowledge and skill to prepare positive models for partial foot prostheses (category I modifications only*****).
14.0	Demonstrate knowledge of Syme Prostheses. The student will be able to:
	14.01 Demonstrate knowledge of designs for Syme prostheses.
	14.02 Demonstrate the skills to fabricate expandable wall and/or medial opening prostheses.
	14.03 Demonstrate knowledge and skill to prepare positive models for Syme prostheses (category I modifications only*****).
	14.04 Demonstrate knowledge of alignment for Syme prostheses.
15.0	Demonstrate knowledge of Transtibial Prostheses. The student will be able to:
	15.01 Demonstrate knowledge of patellar tendon-bearing transtibial socket designs with cuff suspensions systems.
	15.02 Demonstrate knowledge of total surface bearing transtibial socket designs.
	15.03 Demonstrate knowledge of hydrostatic transtibial socket designs using a locking mechanism.
	15.04 Demonstrate knowledge of roll-on suction suspension systems.
	15.05 Demonstrate knowledge of waist belt suspension systems.

	15.06 Demonstrate knowledge of supracondylar suspension systems.
	15.07 Demonstrate knowledge of knee joint and thigh lacer suspension systems.
	15.08 Demonstrate knowledge of transtibial suspension sleeves.
	15.09 Demonstrate knowledge of elevated vacuum transtibial socket designs and suspension systems.
	15.10 Demonstrate the skills to fabricate an Exoskeletal transtibial prosthesis.
	15.11 Demonstrate the skills to fabricate an Endoskeletal transtibial prosthesis.
	15.12 Demonstrate the skills to fabricate a Soft interface for a transtibial prosthesis.
	15.13 Demonstrate the skills to fabricate a transtibial diagnostic socket.
	15.14 Demonstrate knowledge of components for various transtibial prostheses.
	15.15 Demonstrate knowledge and skill to prepare positive models for transtibial prostheses (category I modifications only*****).
	15.16 Demonstrate the skills of transtibial alignment and transfer.
	15.17 Demonstrate techniques for cosmetic finishing of a transtibial prostheses.
16.0	Demonstrate knowledge of Transfemoral Prostheses. The student will be able to:
	16.01 Demonstrate knowledge of Ischial containment transfemoral socket designs and suspensions systems:
	16.02 Demonstrate knowledge of quadrilateral transfemoral socket designs.
	16.03 Demonstrate knowledge of roll-on suction transfemoral suspension systems with or without locking mechanisms.
	16.04 Demonstrate knowledge of hip joint, pelvic band, and waist belt transfemoral suspension systems.
	16.05 Demonstrate knowledge of suction socket transfemoral socket designs and suspension systems.
	16.06 Demonstrate knowledge of auxiliary suspension systems (TES belt, Silesian bandage).
	16.07 Demonstrate knowledge of transfemoral suspension sleeves.
	16.08 Demonstrate knowledge of elevate vacuum transfemoral socket designs and suspension systems.
	16.09 Demonstrate the skills to fabricate transfemoral diagnostic sockets.
	16.10 Demonstrate the skills to fabricate endoskeleton transfemoral prosthesis.

	16.11 Demonstrate knowledge of components for various transfemoral prostheses.
	16.12 Demonstrate knowledge and skills to prepare positive models for transfemoral prostheses (category I modifications only*****).
	16.13 Demonstrate the skills of transfemoral alignment and transfer.
	16.14 Demonstrate techniques for cosmetic finishing of transfemoral prostheses.
17.0	Demonstrate knowledge of Knee Disarticulation and Hip Disarticulation / Hemipelvectomy Prostheses. The student will be able to:
	17.01 Demonstrate knowledge of knee disarticulation prosthetic designs and principles.
	17.02 Demonstrate knowledge of hip disarticulation and hemipelvectomy prosthetic designs and principles.
18.0	Demonstrate knowledge of Transradial Prostheses. The student will be able to:
	18.01 Demonstrate knowledge of partial hand prosthesis designs and principles.
	18.02 Demonstrate knowledge of passive/cosmetic prosthesis designs and principles.
	18.03 Demonstrate knowledge of flexible and rigid hinges for transradial prostheses.
	18.04 Demonstrate knowledge of transradial suspension techniques.
	18.05 Demonstrate knowledge of body powered transradial prosthesis designs and principles.
	18.06 Demonstrate knowledge of external powered transradial prosthesis designs and principles.
	18.07 Demonstrate the skills to fabricate short transradial prosthesis.
	18.08 Demonstrate the skills to fabricate long transradial prosthesis.
	18.09 Demonstrate the skills to fabricate transradial prostheses with rigid and flexible hinges.
	18.10 Demonstrate the skills to fabricate transradial prosthesis control harness and cable systems.
	18.11 Demonstrate knowledge of components for various transradial prostheses.
	18.12 Demonstrate knowledge and skill to prepare positive models for transradial prostheses (category I modifications only*****).
	18.13 Demonstrate the skill of transradial alignment.
	18.14 Demonstrate techniques for cosmetic finishing of transradial prostheses.
19.0	Demonstrate knowledge of Transhumeral Prostheses. The student will be able to:

19.01	Demonstrate knowledge of the elbow disarticulation prosthesis designs and principles.
19.02	Demonstrate knowledge of shoulder disarticulation prosthesis designs and principles.
19.03	Demonstrate knowledge of interscapular-thoracic prosthesis designs and principles.
19.04	Demonstrate knowledge of transhumeral prosthesis designs and principles.
19.05	Demonstrate knowledge of passive/cosmetic transhumeral designs and principles.
19.06	Demonstrate knowledge of body powered transhumeral designs and principles.
19.07	Demonstrate knowledge of external powered transhumeral designs and principles.
19.08	Demonstrate knowledge of transhumeral suspension techniques.
19.09	Demonstrate the skills to fabricate transhumeral prostheses.
19.10	Demonstrate the skills to fabricate a transhumeral control harness and cable system.
19.11	Demonstrate knowledge of components for various transhumeral prostheses.
19.12	Demonstrate knowledge and skill to prepare positive models for transhumeral prostheses (category I modifications only*).
19.13	Demonstrate the skill of transhumeral alignment.
19.14	Demonstrate techniques for cosmetic finishing of transhumeral prostheses.

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as, experimental, quality, and safety procedures are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate and troubleshoot equipment/tools used to make observations. Students understand measurement error; and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

Special Notes

Students who complete an Orthotic and Prosthetic Technician Programs accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP) are eligible to sit for the Certified O & P Technician examination through the American Board for Certification in Orthotics, Prosthetics & Pedorthics (ABCOP). Please visit www.caahep.org and www.abcop.org for more information.

General Education Course Requirements for AS and AAS Degrees

State Board of Education Rule 6A-14.030(4), F.A.C., identifies 15 credit hours as the minimum amount of general education coursework required in the Associate of Science (AS) degree and the Associate of Applied Science (AAS) degree. In addition, Rule 6A-14.0303, F.A.C., implements s. 1007.25, F.S., and requires students entering a technical education degree program in the 2022-2023 academic year, and thereafter, to complete at least one identified core course in each subject area as part of the general education course requirements (15 credit hours total) before a degree is awarded) The core subject areas include:

- Communication.
- Humanities.
- Mathematics.
- Natural Sciences.
- Social Sciences.

Career and Technical Student Organization (CTSO)

CTSOs are co-curricular career and technical student organizations providing leadership training and reinforcing specific career and technical skills. Career and Technical Student Organizations provide activities for students as an integral part of the instruction offered. Other CTSOs not listed in this curriculum framework or recognized by the Florida Department of Education are permissible provided they support student mastery over the standards and benchmarks of this curriculum framework.

Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan

with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

Florida Department of Education
Curriculum Framework

The standards and benchmarks for this program were updated for the 2026-27 academic year.

Program Title: **Nursing R.N.**
Career Cluster: **Health Science**

Associate in Science	
CIP Number	1351380100
Program Type	College Credit
Program Length	72 Credit Hours
CTSO	HOSA
SOC Codes (all applicable)	For program SOC codes, please see the Program and Course Tables section of the CTE Program Resources page linked below.
CTE Program Resources	https://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml

Purpose

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Health Science career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of Health Science career cluster.

The purpose of this program is to prepare students for employment as registered nurses. The Health Careers Core must be taken by all students first (secondary and postsecondary adult) planning to complete any Health Occupations program. Once successfully completed, the core does not need to be repeated at any instructional level.

The content includes but is not limited to, theoretical instruction and clinical experience in medical, surgical, obstetric, pediatric, and geriatric nursing; theoretical instruction and clinical experience in acute, care, long term care and community settings; theoretical instruction and clinical application of vocational role and function; personal, family and community health concepts; nutrition; human growth and development over the life span; body structure and function; interpersonal relationship skills, mental health concepts; pharmacology and administration of medications; legal aspects of practice; and current issues in nursing.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Program Structure

This program is a planned sequence of instruction consisting of 72 credit hours.

When developing the course sequence for the local implementation of this program, select courses that:

- Meet the skill development requirements of the standards and benchmarks of this program.
- Meet the general education core course requirements of Rule 6A-14.0303, Florida Administrative Code.
- Where reasonable and practicable, align with programs offered by your institution or other postsecondary institutions in Florida, including:
  - Related CCC and ATD credentials.
  - Baccalaureate degrees within the same career pathway and/or Federal CIP code.

Visit FloridaShines' Discover Programs website to identify other institutions that offer similar programs to review their course sequencing. Where appropriate, course alignment between institutions offering related programs can facilitate interagency student articulation.

Visit FloridaShines' Common Prerequisites Manual to identify courses that are prerequisites for admission into an upper division program. When sub-baccalaureate courses are aligned to the course admissions requirements of baccalaureate programs with the same career pathway, students can enter upper division coursework seamlessly.

Regulated Programs

This program is regulated by the Florida Board of Nursing: http://floridasnursing.gov/

Clinical instruction of nursing students will meet the requirements of s. 464.019, F.S. Clinical experience must make up at least 50% of the total program. Clinical Simulation may be used for no more than 50% of the total clinical experience unless the Florida Board of Nursing approves additional Clinical Simulation experiences.

Please refer to s. 464.019 (1)(a)(1), F.S., for faculty credential requirements to teach this program.

The program must be approved by the Florida Board of Nursing. It is important that each associate degree nursing program effectively utilize the services of an active program advisory committee composed of individuals representative of the community. Only when the educators and employers work together can the associate degree nursing graduate be provided the competencies that are most needed for successful employment as a new registered nurse.

Human Trafficking Course – SB 340 NCLEX Requirement – Effective July 1, 2027

Graduates of Florida-approved **Practical Nursing (LPN) and Registered Nursing (RN) programs** applying for initial Florida licensure by examination must complete a **two-hour Human Trafficking course after graduation and prior to taking the NCLEX**, as required by **s. 464.008(1)(e), F.S.**

The course must contain the content required for the Human Trafficking continuing education course pursuant to **s. 464.013(3)(c), F.S.**

Human Trafficking Course Requirements and Resources: Registered Nurse (RN) Renewal – Continuing Education Requirements

This course is currently identified by the course provider as a two-hour Florida Human Trafficking course that meets the content standard for initial licensure under **s. 464.008, F.S., as amended by SB 340**, and the requirements of **s. 464.013(3)(c), F.S.** The course is offered online and provides a certificate of completion. Because students completing the course prior to initial licensure may not yet have a Florida nursing license or an active CE Broker account, each student is responsible for **downloading, retaining, and safeguarding the certificate of completion** as documentation of course completion

Implementation: Nursing programs should notify students prior to graduation that the two-hour Human Trafficking course is a **post-graduation, pre-NCLEX requirement**. Graduates should complete the course, retain documentation of successful completion, and follow the current Florida Board of Nursing and Florida Department of Health requirements for verification and NCLEX eligibility.
Statutory Authority: Section 464.008(1)(e), Florida Statutes; Section 464.013(3)(c), Florida Statutes; CS/SB 340 (2026), Chapter 2026-82.

Associate degree nurses (ADN) are prepared to provide nursing care to clients in a variety of settings. ADN graduates are eligible to take the National Council Licensing Examination (NCLEX-RN), which tests minimum competence to practice safe nursing care.

Florida's Career Readiness Skills for CTE Programs

Employability Skills	
01.0	Apply academic skills to workplace scenarios.
01.01	Use reading skills.
01.02	Use writing skills.
01.03	Use mathematical strategies and procedures.
01.04	Use scientific principles and procedures.
02.0	Design a solution to an industry problem.
02.01	Use critical thinking.
02.02	Use creativity.
02.03	Make sound decisions.
02.04	Solve problems.
02.05	Reason.
02.06	Plan and organize.
03.0	Manage resources within an industry project
03.01	Manage time.
03.02	Manage money or resources.
03.03	Manage materials.
03.04	Manage personnel.
04.0	Oversee the subcomponents, operations and output of a technical or organizational system.
04.01	Manage systems.
04.02	Monitor systems.
04.03	Improve systems.
05.0	Use information for decision making.
05.01	Locate information.
05.02	Organize information.
05.03	Use information.

	05.04 Analyze information.
	05.05 Communicate information.
06.0	Apply relevant technology to workplace scenarios to aid productivity.
	06.01 Use technology.
07.0	Interpret and express interpersonal communication.
	07.01 Communicate verbally.
	07.02 Listen actively.
	07.03 Comprehend written material.
	07.04 Convey information in writing.
	07.05 Communicate nonverbally.
	07.06 Interpret nonverbal communication.
08.0	Interact with others to accomplish workplace goals.
	08.01 Collaborate with others in a team.
	08.02 Respond to customer needs.
	08.03 Exercise leadership.
	08.04 Negotiate to resolve conflict.
	08.05 Respect others.
09.0	Manage personal behavior to maximize productivity and professional growth.
	09.01 Demonstrate responsibility and self-discipline.
	09.02 Adapt and show flexibility.
	09.03 Work independently.
	09.04 Demonstrate a willingness to learn.
	09.05 Demonstrate integrity.
	09.06 Demonstrate professionalism.
	09.07 Take initiative.
	09.08 Display positive attitude.
	09.09 Take responsibility for professional growth.

Job Attainment	
10.0	Find, assess and apply to job opportunities.
10.01	Identify online job posts relevant to his or her career aspirations.
10.02	Compare and contrast the job posts' required qualifications, job duties, compensation, benefits and employers.
10.03	Define what information, documentation and writing prompts are required for the positions.
11.0	Communicate personal competence, character and fit for a job opportunity.
11.01	Develop a resume.
11.02	Write a cover letter.
11.03	Curate a professional portfolio that includes work products.
11.04	Prepare for and experience a mock job interview.
12.0	Cultivate and leverage relationships to professionally advance.
12.01	Request a signed reference letter, letter of recommendation and/or an online skill/professionalism endorsement.
12.02	Develop a plan to cultivate a professional digital footprint.
12.03	Develop a networking plan for a specific industry of interest.

Standards

After successfully completing this program, the student will be able to perform the following:

01.0 Demonstrate knowledge of the health care delivery system and health occupations.
02.0 Apply fundamental integrated processes to the practice of professional nursing.
03.0 Follow safety and security protocols for the environment, clients, and healthcare workers.
04.0 Recognize and respond to emergency situations.
05.0 Recognize and practice infection control procedures, including bloodborne diseases and HIV/AIDS.
06.0 Demonstrate employability skills.
07.0 Demonstrate core professional behavior competencies of a professional nurse.
08.0 Demonstrate core communication competencies of a professional nurse.
09.0 Demonstrate core assessment competencies of a professional nurse.
10.0 Demonstrate core clinical decision-making competencies of a professional nurse.
11.0 Demonstrate core caring intervention competencies of a professional nurse.
12.0 Demonstrate core teaching and learning competencies of a professional nurse.
13.0 Demonstrate core collaboration competencies of a professional nurse.
14.0 Demonstrate core managing care competencies of a professional nurse.
15.0 Demonstrate core leadership and delegation competencies of a professional nurse.

Florida Department of Education
Student Performance Standards

Program Title: **Nursing R.N.**
CIP Number: **1351380100**
Program Length: **72 credit hours**

At the completion of this program, the student will be able to:	
Associate Degree Nursing: Inherent within the intended outcomes of the associate degree nursing is the utilization and application of the nursing process (assessment, diagnosis, planning, implementation, and evaluation) across the lifespan and in diverse settings within the health continuum.	
01.0	Demonstrate knowledge of the health care delivery system and health occupations. The student will be able to:
01.01	Identify the basic components of the healthcare delivery system, including public, private, government, and non-profit.
01.02	Identify common methods of payment for healthcare services.
01.03	Describe the various types of healthcare providers and the range of services available, including resources to victims of domestic violence.
01.04	Describe the composition and functions of a healthcare team.
01.05	Identify the general roles and responsibilities of the individual members of the healthcare team.
01.06	Identify the roles and responsibilities of the consumer within the healthcare delivery system.
01.07	Identify characteristics of effective teams.
01.08	Recognize methods for building positive team relationships.
01.09	Discuss attributes and attitudes of an effective leader.
01.10	Recognize factors and situations that may lead to conflict.
01.11	Recognize effective techniques for managing team conflict.
01.12	Describe factors that influence the current delivery system of healthcare.
01.13	Explain the impact of emerging issues, including technology, epidemiology, bioethics, and socioeconomics, on healthcare delivery systems.
02.0	Apply fundamental integrated processes to the practice of professional nursing. The student will be able to:

02.01	Promote an atmosphere of mutual respect and trust with clients by providing encouragement, hope, support, and compassion to help achieve therapeutic outcomes.
02.02	Utilize the six clinical judgement functions (recognizing cues, analyzing cues, prioritizing and hypothesizing, generating solutions, taking action, and evaluating outcomes) to assess presenting situations, prioritizing client concerns, and presenting the best evidence-based solutions in delivering safe client care.
02.03	Employ a scientific clinical reasoning approach to client care that includes assessment, analysis, planning, implementation, and evaluation.
02.04	Maintain accurate written and/or electronic records of the events and activities associated with client care (including verbal and nonverbal communication with the client, caregivers, and members of the healthcare team), adhering to the standards of practice and provision of care.
02.05	Recognize individual, self-reported, and unique client preferences within the applicable and legal standard of care.
02.06	Facilitate the acquisition of healthcare knowledge, skills, and abilities that promote positive behavioral changes.
02.07	Demonstrate professionalism, respect, and civility towards clients in all educational and practice settings.
02.08	Demonstrate appropriate nursing care in clinical experiences, skills labs, and/or simulations.
03.0	Follow safety and security protocols for the environment, clients, and healthcare workers. The student will be able to:
03.01	Recognize safe and unsafe working conditions and report safety hazards.
03.02	Explain why understanding how to safely use medical equipment is important.
03.03	Explain and apply the theory of root-cause analysis.
03.04	Identify and describe methods in medical error reduction and prevention in the various healthcare settings.
03.05	Identify and practice security procedures for medical supplies and equipment.
03.06	Explain personal safety procedures based on Occupational Safety and Health Administration (OSHA) and Centers for Disease Control (CDC) regulations, including standard precautions.
03.07	Recognize Safety Data Sheets and comply with safety signs, symbols, and labels.
03.08	Explain proper body mechanics and ergonomics.
03.09	Explain the procedure for properly identifying patients.
03.10	Explain the procedures for safe transport and transfer of patients.
03.11	Recognize fire, safety, disaster, and evacuation procedures.
03.12	Discuss the Joint Commission patient safety goals (www.jointcommission.org) and any other applicable accrediting/regulatory agency guidelines.

04.0	Recognize and respond to emergency situations. The student will be able to:
04.01	Record and monitor vital signs accurately.
04.02	Describe legal parameters relating to the administration of emergency care.
04.03	Obtain and maintain training for certification on cardiopulmonary resuscitation (CPR), automated external defibrillator (AED), foreign body airway obstruction (FBAO), and first aid.
04.04	Recognize adverse drug-related emergencies and take appropriate first aid action.
05.0	Recognize and practice infection control procedures, including bloodborne diseases and HIV/AIDS. The student will be able to:
05.01	Apply principles of infection control, including standard and transmission-based precautions.
05.02	Demonstrate medical and surgical asepsis such as handwashing, isolation, and sterile technique.
05.03	Describe how to correctly dispose of biohazardous materials according to appropriate government guidelines, such as OSHA.
05.04	Recognize emerging diseases and disorders.
05.05	Distinguish between fact and fallacy regarding the transmission and treatment of diseases caused by bloodborne pathogens.
05.06	Identify community resources and services available to clients with diseases caused by bloodborne pathogens.
05.07	Identify “at-risk” behaviors that promote the spread of diseases caused by bloodborne pathogens and discuss the public education necessary to combat the spread of these diseases.
05.08	Explain infection control techniques designed to prevent the spread of diseases caused by bloodborne pathogens, following CDC guidelines.
05.09	Explain the legal aspects of client care related to HIV/AIDS, including testing.
06.0	Demonstrate employability skills. The student will be able to:
06.01	Identify personal traits or attitudes desirable in a member of the healthcare team.
06.02	Exemplify basic professional standards of healthcare workers as they apply to hygiene, dress, language, confidentiality, and behavior (i.e., telephone etiquette, courtesy, and self-introductions).
06.03	Identify documents that may be required when applying for a job.
06.04	Write an appropriate resume.
06.05	Conduct a job search.
06.06	Complete a job application form correctly.

06.07	Examine levels of education, credentialing requirements, including licensure and certification, employment opportunities, workplace environments, and career growth potential.
06.08	Identify acceptable work habits.
06.09	Recognize appropriate affective/professional behavior.
06.10	Compare careers within the health science career pathways (diagnostic services, therapeutic services, health informatics, support services, and biotechnology research and development).
07.0	Demonstrate core professional behavior competencies of a professional nurse. The student will be able to:
07.01	Practice within the ethical, legal, and regulatory frameworks of nursing and standards of professional nursing practice.
07.02	Report unsafe practices of healthcare providers using appropriate channels of communication.
07.03	Demonstrate accountability for nursing care given by self and or delegated to others.
07.04	Act as an advocate for clients, ensuring that their voices are heard and respected in the healthcare decision-making process.
07.05	Maintain organizational and client confidentiality.
07.06	Demonstrate behaviors of the professional nursing role in accordance with the American Nurses Association (ANA) Code of Ethics.
07.07	Understand the role of professional organizations.
07.08	Serve as a professional role model within healthcare settings and the community at large.
07.09	Recognize the impact of political, social, and demographic forces on the delivery of health care.
07.10	Participate in lifelong learning.
07.11	Implement a plan to meet self-learning needs by engaging in reflective practice, evaluating clinical performance, and identifying areas for improvement to enhance personal and professional growth.
07.12	Delineate and maintain appropriate professional boundaries in the nurse-client relationship.
08.0	Demonstrate core communication competencies of a professional nurse. The student will be able to:
08.01	Utilize therapeutic communication skills when interacting with clients, caregivers, and the healthcare team.
08.02	Communicate relevant, accurate, and complete information in a concise, clear, and timely manner to the client and caregiver(s) as well as interprofessional team members.
08.03	Document relevant, accurate, and complete information regarding assessments, interventions, and progress toward client outcomes.
08.04	Utilize healthcare technologies, including the use of electronic health records and telehealth, to effectively and ethically communicate patient information.

	08.05 Utilize appropriate channels of communication to achieve positive client outcomes.
	08.06 Effectively communicate the needs of all clients and/or caregivers based on the individual's health literacy level.
09.0	Demonstrate core assessment competencies of a professional nurse. The student will be able to:
	09.01 Assess the interaction patterns of the individual client or significant caregiver(s).
	09.02 Assess the developmental, emotional, cultural, religious, and spiritual influences on the client's health status.
	09.03 Assess the client's health status by completing a health history and performing a physical, cognitive, psychosocial, and functional assessment.
	09.04 Assess client and significant caregiver(s) for learning strengths, capabilities, barriers, and educational needs.
	09.05 Assess the client's adaptation to health and behavior issues.
	09.06 Evaluate client responses to nursing interventions.
	09.07 Assess the client's knowledge and ability to access available resources to meet health needs.
	09.08 Assess the client's environment for risk factors that may impact the healthcare status.
10.0	Demonstrate core clinical decision-making competencies of a professional nurse. The student will be able to:
	10.01 Make clinical judgments and management decisions to ensure accurate and safe care.
	10.02 Analyze client data to develop a plan of care.
	10.03 Evaluate the effectiveness of care provided in meeting client outcomes.
	10.04 Modify client care as indicated by the evaluation of outcomes.
	10.05 Participate in problem identification and data collection for research, quality control, or improvement processes to meet client outcomes.
	10.06 Use research and evidence-based data to plan client care and support clinical decision-making.
11.0	Demonstrate core caring intervention competencies of a professional nurse. The student will be able to:
	11.01 Promote the client's dignity.
	11.02 Provide client-centered nursing care based on emotional, cultural, religious, and spiritual influences on the client in diverse settings.
	11.03 Demonstrate caring behavior towards the client, caregiver(s), and interprofessional team members.

11.04	Implement the plan of care for client management across the lifespan within the legal, ethical, and regulatory framework of nursing practice.
11.05	Perform nursing interventions competently according to the current standards of professional nursing practice.
11.06	Provide a safe physical and psychosocial environment for client and caregiver(s) across the lifespan.
11.07	Assist the client and caregiver(s) to cope with and adapt to stressful events and changes in health status, including healthcare and end-of-life decision-making.
11.08	Assist the client and caregiver(s) to achieve optimum well-being.
11.09	Prepare the client and caregiver(s) for independent care management.
11.10	Implement appropriate procedures to meet regulatory and accreditation agency client safety guidelines.
12.0	Demonstrate core teaching and learning competencies of a professional nurse. The student will be able to:
12.01	Develop an individualized teaching plan of care based on client needs.
12.02	Provide the client and caregiver(s) with the information to make choices regarding health in a manner that enables understanding.
12.03	Teach the client and caregiver(s) the resources and skills needed to achieve the desired learning outcomes.
12.04	Evaluate the progress of the client and caregiver(s) toward achievement of the identified learning outcomes.
12.05	Modify the teaching plan based on evaluation of progress toward meeting the learning outcomes.
12.06	Provide assistive personnel with relevant instruction to support the achievement of client outcomes.
13.0	Demonstrate core collaboration competencies of a professional nurse. The student will be able to:
13.01	Create interdisciplinary solutions by analyzing client issues to achieve the best possible outcomes.
13.02	Identify and utilize resources across disciplines to achieve optimum client outcomes.
13.03	Work collaboratively with client, caregiver(s), and interprofessional team members to assess progress and refine strategies for achieving desired outcomes.
14.0	Demonstrate core managing care competencies of a professional nurse. The student will be able to:
14.01	Prioritize client care by applying the nursing clinical judgement model.
14.02	Coordinate and implement personalized care plans for clients and caregiver(s).
14.03	Ensure continuity of care across various healthcare settings.

14.04	Adjust client care to align with evolving healthcare environments and management systems.
14.05	Support client and caregiver(s) in accessing appropriate resources and services.
14.06	Demonstrate proficiency in using current healthcare technologies and information systems.
14.07	Manage client care efficiently by applying cost-effective nursing practices, quality improvement methods, and evidence-based practice.
15.0	Demonstrate core leadership and delegation competencies of a professional nurse. The student will be able to:
15.01	Identify the components of leadership.
15.02	Differentiate between leadership and management.
15.03	Outline the traits of an effective leader.
15.04	Identify the skills required for leading an interdisciplinary team.
15.05	Foster relationships and teamwork through evidence-based practice.
15.06	Delegate client care tasks appropriately that are within the interprofessional team's scope of practice.
15.07	Evaluate the delegated client care tasks.
15.08	Communicate effectively with all members of the interprofessional team.
15.09	Lead teams using a collaborative approach.
15.10	Facilitate shared decision-making client, caregiver(s), and interprofessional team members.
15.11	Apply nursing decision-making that promotes efficient, cost-effective care.
15.12	Use research to inform evidence-based practice that drives positive client outcomes.
15.13	Explain how effective leadership supports unit culture, client outcomes, and organization goals.
15.14	Define the leader's role in quality measures, performance improvement, and meeting accreditation and regulatory requirements.
15.15	Use conflict resolution techniques to maintain a positive and healthy work environment.

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools, and equipment, as well as experimental, quality, and safety procedures, are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate, and troubleshoot equipment/tools used to make observations. Students understand measurement error and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

Special Notes

This program meets the Department of Health's education requirements for HIV/AIDS, Domestic Violence, and Prevention of Medical Errors. Although not a requirement for initial licensure, it is a requirement for renewal, therefore, the instructor **may** provide a certificate for renewal purposes to the student, verifying these requirements have been met.

If students in this program are seeking a licensure, certificate, or registration through the Department of Health, please refer to 456.0635, F.S., for more information on disqualification for a license, certificate, or registration through the Department of Health.

Outcomes 01-11 are referred to as the Health Careers Core and do not have to be completed if the student has previously completed the Core in another health science program. The COR should be taken first in the program. Following the successful completion of the core, the student is eligible to take the National Health Care Foundation Skill Standards Assessment with instructor approval and the completion of a portfolio.

Reinforcement of basic skills in English, mathematics, and sciences appropriate for the job preparatory programs occurs through didactic instruction and applied laboratory procedures or practice.

The location of the ADN program within the community college setting provides an appropriate academic environment for instruction in the biological, physical, social, and behavioral sciences. The community college setting further provides instruction in the communication skills basic to the successful performance of the ADN graduate in the work setting. This body of knowledge supports concepts specific to the practice of nursing.

This program focuses on broad, transferable skills and stresses understanding and demonstration of the following elements of the health care industry: planning, management, community issues, and health, safety, and environmental issues.

General Education Course Requirements for AS and AAS Degrees

State Board of Education Rule 6A-14.030(4), F.A.C., identifies 15 credit hours as the minimum amount of general education coursework required in the Associate of Science (AS) degree and the Associate of Applied Science (AAS) degree. In addition, Rule 6A-14.0303, F.A.C., implements s. 1007.25, F.S., and requires students entering a technical education degree program in the 2022-2023 academic year, and thereafter, to complete at least one identified core course in each subject area as part of the general education course requirements (15 credit hours total) before a degree is awarded. The core subject areas include:

- Communication.
- Humanities.
- Mathematics.
- Natural Sciences.
- Social Sciences.

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Florida Department of Education
Curriculum Framework

Program Title: **Massage Therapy**
Program Type: **Career Preparatory**
Career Cluster: **Health Science**

Career Certificate Program		
Program Number	H120406	
CIP Number	0351350102	
Grade Level	30, 31	
Program Length	750 hours	
Teacher Certification	Refer to the **Program Structure** section.	
CTSO	HOSA	
SOC Codes (all applicable)	For program SOC codes, please see the Program and Course Tables section of the CTE Program Resources page linked below.	
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml	
Basic Skills Level	Computation (Mathematics): 9	Communications (Reading and Language Arts): 10

Purpose

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Health Science career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of Health Science career cluster.

The program is designed to prepare students for employment as Florida licensed massage therapists, all other service workers.

The content includes but is not limited to the theory and practice of massage, theory and practice of hydrotherapy, hygiene, practice demonstration, human anatomy and physiology, legal aspects of massage practice, allied modalities, leadership and human relations skills, health and safety, CPR, and employability skills. Colonic irrigation is optional post initial licensure.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Program Structure

This program is a planned sequence of instruction consisting of two occupational completion points.

This program is comprised of courses which have been assigned course numbers in the SCNS (Statewide Course Numbering System) in accordance with Section 1007.24 (1), F.S. Career and Technical credit shall be awarded to the student on a transcript in accordance with Section 1001.44(3) (b), F.S.

To teach the courses listed below, instructors must hold at least one of the teacher certifications indicated for that course.

The following table illustrates the postsecondary program structure:

OCP	Course Number	Course Title	Teacher Certification	Length
A	MSS0204	Massage Therapy 1	MASSAGE TH 7 G	375 hours
B	MSS0209	Massage Therapy 2		375 hours

Regulated Programs

The program must be approved by the Florida Department of Health, Board of Massage Therapy so that the graduates may take the board approved examination to practice as massage therapists.

This program meets the Department of Health's education requirements for HIV/AIDS, Domestic Violence and Prevention of Medical Errors. Although not a requirement for initial licensure, it is a requirement for renewal, therefore the instructor **may** provide a certificate for renewal purposes to the student verifying these requirements have been met.

After completion of this program students will be eligible to make an application to take the licensure examination approved by the Board of Massage Therapy, at the Department of Health, 4052 Bald Cypress Way, Bin # CO6, Tallahassee, FL 32399 850-488-0595

If students in this program are seeking a licensure, certificate or registration through the Department of Health, please refer to 456.0635, F.S. for more information on disqualification for a license, certificate, or registration through the Department of Health.

Colonic irrigation instruction is optional post initial licensure. If such instruction is provided, it must meet minimum standards as provided per the Board of Massage Therapy rule 64B7-32.005, F.A.C.

Course of Study Classroom Hours as stated in 64B7-32.003, F.A.C.

Topic	Required Hours
Anatomy & Physiology	150
Basic Massage Theory and History	100
Clinical Practicum	125

Allied Modalities	76
Business	15
Theory and Practice of Hydrotherapy	15
Florida Laws and Rules (Chapters 456 and 480, F.S. and 64B7, F.A.C)	10
Professional Ethics	4
HIV/AIDS Education	3
Medical Errors	2

Florida's Career Readiness Skills for CTE Programs

Employability Skills	
01.0	Apply academic skills to workplace scenarios.
01.01	Use reading skills.
01.02	Use writing skills.
01.03	Use mathematical strategies and procedures.
01.04	Use scientific principles and procedures.
02.0	Design a solution to an industry problem.
02.01	Use critical thinking.
02.02	Use creativity.
02.03	Make sound decisions.
02.04	Solve problems.
02.05	Reason.
02.06	Plan and organize.
03.0	Manage resources within an industry project
03.01	Manage time.
03.02	Manage money or resources.
03.03	Manage materials.
03.04	Manage personnel.
04.0	Oversee the subcomponents, operations and output of a technical or organizational system.
04.01	Manage systems.
04.02	Monitor systems.
04.03	Improve systems.
05.0	Use information for decision making.
05.01	Locate information.
05.02	Organize information.
05.03	Use information.

	05.04 Analyze information.
	05.05 Communicate information.
06.0	Apply relevant technology to workplace scenarios to aid productivity.
	06.01 Use technology.
07.0	Interpret and express interpersonal communication.
	07.01 Communicate verbally.
	07.02 Listen actively.
	07.03 Comprehend written material.
	07.04 Convey information in writing.
	07.05 Communicate nonverbally.
	07.06 Interpret nonverbal communication.
08.0	Interact with others to accomplish workplace goals.
	08.01 Collaborate with others in a team.
	08.02 Respond to customer needs.
	08.03 Exercise leadership.
	08.04 Negotiate to resolve conflict.
	08.05 Respect others.
09.0	Manage personal behavior to maximize productivity and professional growth.
	09.01 Demonstrate responsibility and self-discipline.
	09.02 Adapt and show flexibility.
	09.03 Work independently.
	09.04 Demonstrate a willingness to learn.
	09.05 Demonstrate integrity.
	09.06 Demonstrate professionalism.
	09.07 Take initiative.
	09.08 Display positive attitude.
	09.09 Take responsibility for professional growth.

Job Attainment	
10.0	Find, assess and apply to job opportunities.
10.01	Identify online job posts relevant to his or her career aspirations.
10.02	Compare and contrast the job posts' required qualifications, job duties, compensation, benefits and employers.
10.03	Define what information, documentation and writing prompts are required for the positions.
11.0	Communicate personal competence, character and fit for a job opportunity.
11.01	Develop a resume.
11.02	Write a cover letter.
11.03	Curate a professional portfolio that includes work products.
11.04	Prepare for and experience a mock job interview.
12.0	Cultivate and leverage relationships to professionally advance.
12.01	Request a signed reference letter, letter of recommendation and/or an online skill/professionalism endorsement.
12.02	Develop a plan to cultivate a professional digital footprint.
12.03	Develop a networking plan for a specific industry of interest.

Standards

After successfully completing this program, the student will be able to perform the following:

01.0 Demonstrate the ability to communicate effectively as a medical therapy professional.
02.0 Demonstrate an understanding of human anatomy and physiology, kinesiology and pathology as related to the practice of massage therapy.
03.0 Exhibit an understanding of the principles of the theories of therapeutic massage and demonstrate the proper techniques of massage manipulations.
04.0 Demonstrate the recommended safety, hygiene and health practices for the massage therapist.
05.0 Exhibit an understanding of the principles of the theory of hydrotherapy and use hydrotherapy modalities.
06.0 Explain and appropriately apply allied modalities related to massage therapy.
07.0 Demonstrate knowledge of ethical practice standards and the statutes and rules of Florida Massage Practice Act and the rules of the Florida Board of Massage Therapy (Chapter 480, F.S.; Chapter 64B7, F.A.C.; Chapter 456, F.S.).
08.0 Demonstrate knowledge of basic business practices and standards.

Florida Department of Education
Student Performance Standards

Program Title: **Massage Therapy**
Career Certificate Program Number: **H120406**

Course Number: MSS0204 **Occupational Completion Point: A** **Massage Therapy 1 – 375 Hours**	
01.0	Demonstrate the ability to communicate effectively as a medical therapy professional. The student will be able to:
01.01	Demonstrate knowledge of professional communication, active listening skills, and ability to interview the client/patient to ascertain his/her indications and/or contraindications for therapy.
01.02	Demonstrate knowledge and use of appropriate medical terminology and ability to perform proper S.O.A.P (Subjective, objective, assessment and plan) notation in the field of massage therapy.
01.03	Demonstrate knowledge of the Patients' Bill of Rights and informed consent.
01.04	Identify and demonstrate Health Insurance Portability and Accountability Act (HIPAA) standards within the massage therapy treatment and business setting.
02.0	Demonstrate an understanding of human anatomy and physiology, kinesiology and pathology as related to the practice of massage therapy. The student will be able to:
02.01	Explain the structure and function of all the body systems, organs, tissues and cells with emphasis on origins, insertions and actions of muscles.
02.02	Explain the concept of homeostasis and how it relates to massage therapy and its modalities.
02.03	Explain the effects of massage on the human body.
02.04	Demonstrate a basic knowledge of kinesiology.
02.05	Demonstrate a basic knowledge of various body systems' pathology.
03.0	Exhibit an understanding of the principles of the theories of therapeutic massage and demonstrate the proper techniques of massage manipulations. The student will be able to:
03.01	Explain the mechanical, reflexive and physiologic chemical effects of therapeutic massage.
03.02	Demonstrate knowledge of the effects, usage, indications and contraindications of various lubricants in massage therapy and apply appropriately.
03.03	Demonstrate awareness of professional boundaries using acknowledgement of body language, verbal communication, and cultural cues.
03.04	Practice proper body mechanics.

	03.05 Accurately perform all therapeutic massage strokes and manipulations.
	03.06 Demonstrate Proper client/patient positioning, support and draping techniques.
	03.07 Demonstrate an understanding of initial treatment plan assessment, & re-assessment and treatment indications and contraindications of massage therapy.
	03.08 Apply various massage therapy techniques properly when presented with various pathological conditions and contraindications.
	03.09 Effectively operate common massage therapy equipment which may include electrical devices such as vibrating tools and electronic simulation, where applicable.
04.0	Demonstrate the recommended safety, hygiene and health practices for the massage therapist. The student will be able to:
	04.01 Explain the ways a massage establishment should be planned and maintained to promote health and safety including fire, disaster and evacuation procedures.
	04.02 Outline practices conducive to personal health, hygiene and appearance.
	04.03 Demonstrate knowledge of measures conducive to eliminating medical errors
	04.04 Demonstrate an understanding of diseases caused by airborne and blood borne pathogens and their legal aspects.

Course Number: MSS0209 Occupational Completion Point: B Massage Therapy 2 – 375 Hours	
05.0	Exhibit an understanding of the principles of the theory of hydrotherapy and use hydrotherapy modalities. The student will be able to:
	05.01 Explain the effects of hydrotherapy on the human body.
	05.02 Interview the clients/patients to ascertain their indications and/or contraindications for hydrotherapy.
	05.03 Appropriately perform hydrotherapy services such as thermal therapy and cryotherapy.
	05.04 Demonstrate knowledge of accepted temperature and time standards for hydrotherapy techniques.
	05.05 Educate clients/ patients in the use of various hydrotherapy self-care techniques.
06.0	Explain and appropriately apply allied modalities related to massage therapy. The student will be able to:
	06.01 Identify various modalities utilized within the scope of practice of massage therapy.
	06.02 Identify allied modalities outside the scope of massage therapy for the purposes of referral.
	06.03 Explain the effects on the human body while utilizing various massage allied modalities.

	06.04 Educate clients/patients in the use of various self-care techniques and applications including stretching and joint movement.
07.0	Demonstrate knowledge of ethical practice standards and the statutes and rules of Florida Massage Practice Act and the rules of the Florida Board of Massage Therapy (Chapter 480, F.S.; Chapter 64b7, F.A.C.; Chapter 456, F.S.). The student will be able to:
	07.01 State the purpose of the Massage Practice Act. (Chapter 456 and 480, F.S;.Rule 64B7, F.A.C.)
	07.02 State the qualifications necessary for licensure and renewal of license.
	07.03 State the function of the Board of Massage Therapy and the Department of Health.
	07.04 State the conditions necessary for acceptance for examination for licensure.
	07.05 State the requirements for massage therapy establishments and their inspection.
	07.06 Understand the grounds for which disciplinary actions may be taken by the Board of Massage Therapy.
	07.07 Define the terms: Board, Department, Massage Therapist, Apprentice, Inactive Licensure, Massage Establishment, Certification and Licensure.
	07.08 Describe the various types of healthcare providers and the range of services available including resources to victims of domestic violence.
	07.09 Demonstrate knowledge of ethical conduct in the massage therapy practice and the responsibility to report ethical violations.
	07.10 Discuss the massage therapists' responsibility to report abuse including domestic violence and neglect per the vulnerable persons act, including strategies for identifying, assessing, and responding to clients who may be current or past victims of human trafficking.
	07.11 Understand the importance of and practice proper medical documentation, including storage and disposal.
08.0	Demonstrate knowledge of basic business practices and standards. The student will be able to:
	08.01 Define basic business practices and standards, including basic components of public private government and nonprofit healthcare delivery systems.
	08.02 Identify the function, roles and responsibilities of the massage therapist as part of the health care team.
	08.03 List the advantages and disadvantages of business ownership versus independent contractor versus employee.
	08.04 Identify the necessary personal characteristics of a successful entrepreneur and a successful employee.
	08.05 Demonstrate the ability to create a resume and find employment opportunities with the use of current technology.

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as, experimental, quality, and safety procedures are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate and troubleshoot equipment/tools used to make observations. Students understand measurement error; and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

Special Notes

Reinforcement of basic skills in English, mathematics, and science appropriate for the job preparatory programs occurs through vocational classroom instruction and applied laboratory procedures or practice.

Career and Technical Student Organization (CTSO)

CTSOs are co-curricular career and technical student organizations providing leadership training and reinforcing specific career and technical skills. Career and Technical Student Organizations provide activities for students as an integral part of the instruction offered. Other CTSOs not listed in this curriculum framework or recognized by the Florida Department of Education are permissible provided they support student mastery over the standards and benchmarks of this curriculum framework.

Cooperative Training – OJT

On-the-job training is appropriate but not required for this program. Whenever offered, the rules, guidelines, and requirements specified in the OJT framework apply.

Basic Skills

In Career Certificate programs offered for 450 hours or more, in accordance with Rule 6A-10.040, F.A.C., the minimum basic skills grade levels required for postsecondary adult career and technical students to complete this program are: Computation (Mathematics) and Communications (Reading and Language Arts). These grade level numbers correspond to a grade equivalent score obtained on a state designated basic skills examination.

Adult students with disabilities, as defined in Section 1004.02, Florida Statutes, may be exempted from meeting the Basic Skills requirements (Rule 6A-10.040). Students served in exceptional student education (except gifted) as defined in s. 1003.01, F.S., may also be exempted from meeting the Basic Skills requirement. Each school district and Florida College System Institution must adopt a policy addressing procedures for exempting eligible students with disabilities from the Basic Skills requirement as permitted in Section 1004.91, F.S.

Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

Note: postsecondary curriculum and regulated programs cannot be modified.

Florida Department of Education
Curriculum Framework

The standards and benchmarks for this program were updated for the 2026-27 academic year.

Program Title: **Dental Assisting**
Program Type: **Career Preparatory**
Career Cluster: **Health Science**

Career Certificate Program		
Program Number	H170106	
CIP Number	0351060112	
Grade Level	30, 31	
Program Length	1230 hours	
Teacher Certification	Refer to the **Program Structure** section.	
CTSO	HOSA	
SOC Codes (all applicable)	For program SOC codes, please see the Program and Course Tables section of the CTE Program Resources page linked below.	
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml	
Basic Skills Level	Computation (Mathematics): 10	Communications (Reading and Language Arts): 10

Purpose

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Health Science career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of Health Science career cluster.

The program is designed to prepare students for employment as dental assistants and to take the Dental Assisting National Board Examination. The program should meet the requirements of the Commission on Dental Accreditation of the American Dental Association and standards recommended by the Florida Board of Dentistry.

The content includes, but is not limited to, dental office and patient management, basic dental laboratory procedures, dental and general anatomy, dental terminology, nutrition, dental instrument and equipment utilization, microbiology, dental pharmacology and anesthesia, chairside assisting and expanded functions, dental office emergencies/CPR, dental radiography, maintenance and asepsis of dental operatory and instrumentation,

dental specialty procedures, employability skills, leadership and human relations skills, ethics and jurisprudence, dental materials and preventive dentistry.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Program Structure

This program is a planned sequence of instruction consisting of 3 occupational completion points.

This program is comprised of courses which have been assigned course numbers in the SCNS (Statewide Course Numbering System) in accordance with Section 1007.24 (1), F.S. Career and Technical credit shall be awarded to the student on a transcript in accordance with Section 1001.44(3) (b), F.S.

To teach the courses listed below, instructors must hold at least one of the teacher certifications indicated for that course.

The following table illustrates the postsecondary program structure:

OCP	Course Number	Course Title	Teacher Certification	Length
A	DEA0725	Introduction to Dental Assisting	DENTL ASST @7 7G	90 hours
B	DEA0726	Dental Infection Control Assistant		210 hours
C	DEA0727	Dental Assisting 1		465 hours
	DEA0728	Dental Assisting 2		465 hours

Florida's Career Readiness Skills for CTE Programs

Employability Skills	
01.0	Apply academic skills to workplace scenarios.
01.01	Use reading skills.
01.02	Use writing skills.
01.03	Use mathematical strategies and procedures.
01.04	Use scientific principles and procedures.
02.0	Design a solution to an industry problem.
02.01	Use critical thinking.
02.02	Use creativity.
02.03	Make sound decisions.
02.04	Solve problems.
02.05	Reason.
02.06	Plan and organize.
03.0	Manage resources within an industry project
03.01	Manage time.
03.02	Manage money or resources.
03.03	Manage materials.
03.04	Manage personnel.
04.0	Oversee the subcomponents, operations and output of a technical or organizational system.
04.01	Manage systems.
04.02	Monitor systems.
04.03	Improve systems.
05.0	Use information for decision making.
05.01	Locate information.
05.02	Organize information.
05.03	Use information.

	05.04 Analyze information.
	05.05 Communicate information.
06.0	Apply relevant technology to workplace scenarios to aid productivity.
	06.01 Use technology.
07.0	Interpret and express interpersonal communication.
	07.01 Communicate verbally.
	07.02 Listen actively.
	07.03 Comprehend written material.
	07.04 Convey information in writing.
	07.05 Communicate nonverbally.
	07.06 Interpret nonverbal communication.
08.0	Interact with others to accomplish workplace goals.
	08.01 Collaborate with others in a team.
	08.02 Respond to customer needs.
	08.03 Exercise leadership.
	08.04 Negotiate to resolve conflict.
	08.05 Respect others.
09.0	Manage personal behavior to maximize productivity and professional growth.
	09.01 Demonstrate responsibility and self-discipline.
	09.02 Adapt and show flexibility.
	09.03 Work independently.
	09.04 Demonstrate a willingness to learn.
	09.05 Demonstrate integrity.
	09.06 Demonstrate professionalism.
	09.07 Take initiative.
	09.08 Display positive attitude.
	09.09 Take responsibility for professional growth.

Job Attainment	
10.0	Find, assess and apply to job opportunities.
10.01	Identify online job posts relevant to his or her career aspirations.
10.02	Compare and contrast the job posts' required qualifications, job duties, compensation, benefits and employers.
10.03	Define what information, documentation and writing prompts are required for the positions.
11.0	Communicate personal competence, character and fit for a job opportunity.
11.01	Develop a resume.
11.02	Write a cover letter.
11.03	Curate a professional portfolio that includes work products.
11.04	Prepare for and experience a mock job interview.
12.0	Cultivate and leverage relationships to professionally advance.
12.01	Request a signed reference letter, letter of recommendation and/or an online skill/professionalism endorsement.
12.02	Develop a plan to cultivate a professional digital footprint.
12.03	Develop a networking plan for a specific industry of interest.

Standards

After successfully completing this program, the student will be able to perform the following:

01.0 Demonstrate knowledge of the dental health care delivery system and dental health occupations.
02.0 Use oral, written, and electronic communication skills with professional etiquette in creating, expressing, and interpreting information and ideas.
03.0 Describe the legal and ethical responsibilities of the dental health care worker.
04.0 Demonstrate an understanding of general anatomy and physiology and apply wellness and disease concepts.
05.0 Demonstrate the importance of health, safety, and environmental management systems in dental organizations and their importance to organizational performance and regulatory compliance.
06.0 Recognize and respond to emergency situations.
07.0 Use information technology tools.
08.0 Explain the importance of employability skills.
09.0 Demonstrate knowledge of airborne and blood-borne diseases.
10.0 Demonstrate leadership and teamwork skills needed to accomplish team goals and objectives.
11.0 Use dental terminology.
12.0 Identify structures and explain functions and pathologies of dental and general head and neck anatomy.
13.0 Identify principles of microbiology, disease transmission, and disease prevention, and perform infection control procedures.
14.0 Identify, describe, maintain, and utilize dental instruments and equipment.
15.0 Record patient assessment and treatment data.
16.0 Identify the functions of pharmacology and anesthesia as they relate to dentistry.
17.0 Identify and perform dental radiographic procedures using current technology.
18.0 Identify properties and uses and manipulate dental materials.
19.0 Perform chairside assisting for general dentistry and specialty procedures.
20.0 Describe principles and perform techniques of preventive dentistry.
21.0 Perform general dental business office procedures.
22.0 Demonstrate professionalism as a dental team member in the clinical setting.

Florida Department of Education
Student Performance Standards

Program Title: Dental Assisting
Career Certificate Program Number: H170106

Course Number: DEA0725 **Occupational Completion Point: A** **Introduction to Dental Assisting – 90 Hours**	
01.0	Demonstrate knowledge of the dental health care delivery system and dental health occupations. The student will be able to:
01.01	Identify the basic components of the dental health care delivery system, including public, private, government, and non-profit.
01.02	Describe the various types of dental health care providers and the range of services available.
01.03	Describe the composition and functions of a dental health care team.
01.04	Identify the general roles and responsibilities of the individual members of the dental health care team.
01.05	Identify the roles and responsibilities of the consumer within the dental healthcare system.
01.06	Explain the causes and effects of factors that influence the current delivery system of dental healthcare.
01.07	Discuss the impact of emerging issues, including technology, epidemiology, bioethics, and socioeconomics, on the dental healthcare delivery system.
01.08	Discuss the history of dentistry and the dental health care team.
01.09	Demonstrate knowledge in communicating and collaborating with other members of the health care team to support comprehensive patient care.
02.0	Use oral, written, and electronic communication skills with professional etiquette in creating, expressing, and interpreting information and ideas. The student will be able to:
02.01	Apply basic speaking and active listening skills, including reflection, restatement, and clarification techniques.
02.02	Develop basic observational skills and related documentation strategies in written and oral form.
02.03	Identify characteristics of communication, including communication styles and barriers.
02.04	Compose written communication using correct spelling, grammar, etiquette, formatting, confidentiality, and specific formats of letter writing.
02.05	Recognize components of medical and dental terminology, abbreviations, and their uses.
02.06	Recognize the importance of courtesy and respect for patients and other health care workers and maintain good interpersonal relationships.

02.07	Recognize the importance of patient education regarding dental and health care.
02.08	Adapt communication skills to varied levels of understanding and orientation of diversity, but not limited to sexual orientation, gender orientation, disability, age, culture, economics, or ethnicity.
02.09	Identify psychological considerations influencing communication and behaviors.
03.0	Describe the legal and ethical responsibilities of the dental health care worker. The student will be able to:
03.01	Identify areas of 466, F.S. and Rule 64B5-16, F.A.C. and Rule 64B5-25, F.A.C. applicable to practice by the dental health workers and providers.
03.02	Explain practices that could result in malpractice, liability, negligence, abandonment, false imprisonment, and fraud.
03.03	Demonstrate procedures for accurate documentation and record keeping.
03.04	Interpret healthcare facility policy and procedures.
03.05	Explain the patients' "Bill of Rights”.
03.06	Identify and implement standards of the Health Insurance Portability and Accountability Act (HIPAA) and apply these standards to social media and the use of personal electronic devices in the workplace.
03.07	Distinguish between expressed, implied, and informed consent.
03.08	Explain the laws governing harassment, labor, and employment.
03.09	Differentiate between legal and ethical issues in dentistry.
03.10	Describe the dental profession’s Code of Ethics with emphasis on the dental assisting profession.
03.11	Identify and compare personal, professional, and organizational ethics.
03.12	Recognize the limits of authority and responsibility of dental health care workers, including legislated scope of practice.
03.13	Recognize and report illegal and/or unethical practices of dental health care workers.
03.14	Recognize various forms of abuse (i.e., trafficking, domestic violence, and neglect).
03.15	Demonstrate an understanding of reporting requirements for all types of abuse.
03.16	Identify resources for victims of abuse.
03.17	Explain risk management and root cause analysis.
03.18	Define commonly used legal vocabulary relating to dentistry.

	03.19 Describe ethical considerations/obligations in the dental team-patient relationship.
	03.20 Apply self-assessment skills to prepare for lifelong learning.
	03.21 Apply ethical principles, legal, and regulatory concepts to resolve ethical dilemmas.
04.0	Demonstrate an understanding of general anatomy and physiology and apply wellness and disease concepts. The student will be able to:
	04.01 Develop a basic understanding of the structure and function of the body systems.
	04.02 Identify common disorders related to each of the body systems.
	04.03 Identify and develop a control plan to address the issues of positive self-image, wellness, and stress.
05.0	Demonstrate the importance of health, safety, and environmental management systems in dental organizations and their importance to organizational performance and regulatory compliance. The student will be able to:
	05.01 Describe personal and jobsite safety rules and regulations that maintain safe and healthy work environments.
	05.02 Identify and describe methods in medical error reduction and prevention in the dental healthcare setting.
	05.03 Demonstrate an understanding of personal safety procedures based on the Occupational Safety and Health Administration (OSHA) and Centers for Disease Control (CDC) regulations (including standard precautions).
	05.04 Recognize Safety Data Sheets (SDS) and Globally Harmonized System (GHS) labels and comply with safety signs, symbols, and labels.
	05.05 Demonstrate procedures for the safe transport and transfer of patients.
	05.06 Describe workplace preparedness and procedures for fire safety, disaster, and evacuation.
	05.07 Explain emergency procedures to follow for responding to, reporting, and recording workplace incidents and acts of violence.
	05.08 Demonstrate handwashing and the use of personal protective equipment used in dentistry.
06.0	Recognize and respond to emergency situations. The student will be able to:
	06.01 Take and record vital signs.
	06.02 Describe legal parameters relating to the administration of emergency care.
	06.03 Obtain and maintain certification in basic life support (BLS), cardiopulmonary resuscitation (CPR), automated external defibrillator (AED), foreign body airway obstruction (FBAO), and first aid.
07.0	Use information technology tools. The student will be able to:
	07.01 Define terms and demonstrate basic computer skills.

	07.02 Interpret information from electronic medical documents.
08.0	Explain the importance of employability skills. The student will be able to:
	08.01 Identify personal traits or attitudes desirable in a member of the healthcare team.
	08.02 Exemplify basic professional standards of dental healthcare workers/providers as they apply to hygiene, dress, language, confidentiality, and behavior (i.e., telephone etiquette, courtesy, and self-introductions).
	08.03 Examine levels of education and industry credentialing requirements, including licensure and certification, employment opportunities, workplace environments, and career growth potential.
09.0	Demonstrate knowledge of airborne and blood-borne diseases. The student will be able to:
	09.01 Recognize emerging diseases and disorders.
	09.02 Demonstrate knowledge of the transmission and treatment of diseases caused by airborne and blood-borne pathogens, infectious agents, and organisms.
	09.03 Identify "at risk" behaviors that promote the spread of infectious diseases caused by airborne and blood-borne pathogens and the public education necessary to combat the spread of these diseases.
	09.04 Identify community resources and services available to individuals with diseases caused by airborne and blood-borne pathogens.
	09.05 Apply infection control techniques designed to prevent the spread of diseases caused by airborne and blood borne pathogens to the care of all patients following the Centers for Disease Control and Prevention (CDC) guidelines.
	09.06 Demonstrate knowledge of the legal aspects of patient privacy, standard precautions, and incident reporting protocols.
	09.07 Demonstrate knowledge of the legal aspects of treating patients with infectious diseases, including testing and proper documentation.
10.0	Demonstrate leadership and teamwork skills needed to accomplish team goals and objectives. The students will be able to:
	10.01 Analyze attributes and attitudes of an effective leader to include emotional intelligence.
	10.02 Recognize factors and situations that may lead to conflict.
	10.03 Demonstrate effective problem-solving techniques for managing team conflict.

Course Number: DEA0726
Occupational Completion Point: B
Dental Infection Control Assistant – 210 Hours

11.0	Use dental terminology. The student will be able to:
	11.01 Identify and define common dental terms.

	11.02 Demonstrate the use of proper dental terminology in the dental environment.
12.0	Identify structures and explain functions and pathologies of dental and general head and neck anatomy. The student will be able to:
	12.01 Identify structures and functions of the head and neck anatomy, including bones, muscles, sinuses, salivary glands, lymph nodes, nerves, and blood vessels.
	12.02 Identify embryonic development of the head, oral cavity, and teeth.
	12.03 Identify teeth and their landmarks, and the morphological characteristics of each individual tooth.
	12.04 Describe the histological components of the head, oral cavity, and elements of the teeth and supporting structures.
	12.05 Recognize and describe oral pathological conditions related to the teeth and their supporting structures.
	12.06 Recognize and describe developmental anomalies related to the teeth, face, and oral structures.
	12.07 Describe and differentiate between occlusion and malocclusion.
	12.08 Discuss the adverse effects of the use of alcohol, tobacco, and both legal and illegal drugs on the oral cavity.
13.0	Identify principles of microbiology, disease transmission, and disease prevention, and perform infection control procedures. The student will be able to:
	13.01 Differentiate between pathogenic and non-pathogenic microorganisms.
	13.02 Describe pathogens and modes of disease transmission.
	13.03 Differentiate between aseptic and non-aseptic environments.
	13.04 Perform aseptic handwashing technique.
	13.05 Describe, apply, and differentiate between methods of pre-cleaning, disinfection, and sterilization of the dental environment.
	13.06 Identify chemicals and their uses for controlling the spread of disease in the dental environment.
	13.07 Identify and practice the current CDC guidelines for infection control in dental healthcare settings.
	13.08 Describe the duties of the dental office safety coordinator.
	13.09 Demonstrate compliance with the OSHA Blood-Borne Pathogens Standard (29CFR-1910.1030) applicable to the dental office environment.
	13.10 Identify and manage hazardous chemicals and biomedical wastes in accordance with the OSHA Hazard Communications Standard (29CFR-1910.1200), 64E-16 F.A.C., and Environmental Protection Agency regulations.
	13.11 Define principles of infection control, including standard and transmission-based precautions.

	13.12 Demonstrate knowledge of dental asepsis within the dental environment.
	13.13 Implement appropriate hand hygiene procedures and use of personal protective equipment.
	13.14 Demonstrate knowledge of surgical asepsis and isolation.
14.0	Identify, describe, maintain, and utilize dental instruments and equipment. The student will be able to:
	14.01 Identify various types, functions, and operations of dental operatory and laboratory equipment.
	14.02 Identify types and functions of operative, restorative, surgical, prosthodontic, periodontic, orthodontic, and endodontic dental instruments.
	14.03 Maintain dental operatory equipment and instruments.
	14.04 Identify types and functions of specific dental hygiene instruments with emphasis on category rather than individual instruments.
	14.05 Seat and dismiss patients.
	14.06 Operate oral evacuation devices and air/water syringe.
	14.07 Maintain a clear field of vision, including isolation techniques.
	14.08 Perform a variety of instrument transfers to include four-handed dentistry.
	14.09 Utilize appropriate chairside assistant ergonomics.
	14.10 Assist with and place dental dams as permitted by Florida Statute and Florida Board of Dentistry Rule.

Course Number: DEA0727 Occupational Completion Point: C Dental Assisting 1 – 465 Hours	
15.0	Record patient assessment and treatment data. The student will be able to:
	15.01 Take and record medical, health, and dental histories.
	15.02 Record assessment of existing oral conditions.
	15.03 Perform intraoral and extraoral photography.
	15.04 Record conditions diagnosed by the dentist.
	15.05 Record treatment-related data on the patient’s clinical record.

	15.06 Record treatment plan and treatment in the patient's chart.
	15.07 Perform a visual assessment of existing oral conditions.
	15.08 Distinguish between and report subjective, objective, indications, and contraindication information.
	15.09 Report relevant information in order of occurrence.
16.0	Identify the functions of pharmacology and anesthesia as they relate to dentistry. The student will be able to:
	16.01 Identify drug requirements, agencies, and regulations, including prescribing regulations related to medications subject to addiction.
	16.02 Distinguish among the five schedules of controlled substances.
	16.03 Record a drug/medication prescription in a patient's chart.
	16.04 Understand ratios and proportional problems to calculate prescribed drug dosages as instructed by the dentist.
	16.05 Identify drug/medicaments actions, metabolism, side effects, indications, and contraindications; verify with Physician's Desk Reference (PDR) or its equivalent.
	16.06 Identify pharmaceuticals and medicaments used in dentistry.
	16.07 Identify the tissues innervated by each of the nerves associated with dental local and topical anesthetics to prepare and apply topical anesthetic agent.
	16.08 Identify properties of anesthetics.
	16.09 Prepare syringes for the administration of local anesthetics.
	16.10 Monitor and identify precautions in the use of nitrous oxide-oxygen conscious sedation.
	16.11 Understand the calculations of nitrous oxide-oxygen delivered by the dentist during a conscious sedation procedure.
	16.12 Identify drugs and agents used for treating dental-related infection.
	16.13 Identify and respond to dental office emergencies.
	16.14 Describe the signs and symptoms of drug addiction.
	16.15 Recognize specific conditions in the oral cavity that may be caused by pharmaceutical agents.
	16.16 Discuss the dental team's responsibility to recognize patients with drug addictions.
17.0	Identify and perform dental radiographic procedures using current technology. The student will be able to:

17.01	Describe the history, physics, and biological effects of ionizing radiation.
17.02	Identify parts of the radiography machine, including accessories.
17.03	Demonstrate radiologic health protection techniques.
17.04	Place and expose dental radiographic images on digital image receptors.
17.05	Perform extraoral radiography as required for dental diagnostic procedures.
17.06	Describe and identify radiographic anatomical landmarks and pathologies.
17.07	Mount radiographic images.
17.08	Describe how to maintain digital image receptors and/or image devices.
17.09	Maintain digitally acquired radiographic images.
17.10	Practice infection control procedures for all radiographic procedures.
18.0	Identify properties and uses and manipulate dental materials. The student will be able to:
18.01	Identify properties and uses and manipulate gypsum.
18.02	Identify properties and uses and manipulate restorative materials.
18.03	Identify properties and uses and manipulate dental cements.
18.04	Place and remove matrices as permitted by Florida Statute and Florida Board of Dentistry Rule.
18.05	Place and remove temporary restorations as permitted by Florida Statutes and Florida Board of Dentistry Rule.
18.06	Identify properties and uses and manipulate impression materials.
18.07	Make intraoral impressions as permitted by Florida Statute and Florida Board of Dentistry Rule.
18.08	Identify properties and uses and manipulate acrylics and thermoplastic materials.
18.09	Identify properties and uses and manipulate waxes.
18.10	Perform dental laboratory procedures to include the fabrication of casts, custom trays, whitening trays, temporary crowns, and bridges.
18.11	Identify and manage hazardous dental materials and wastes in accordance with the OSHA Hazard Communications Standard (29CFR-1910.1200) and Environmental Protection Agency regulations.

	18.12 Employ measurements of time, temperature, distance, capacity, and mass/weight during the manipulation of dental materials.
19.0	Perform chairside assisting for general dentistry and specialty procedures. The student will be able to:
	19.01 Describe procedures, equipment, materials, and instrumentation used in the dental specialties to include but not limited to periodontics, endodontics, pedodontics, oral and maxillofacial specialties, orthodontics, prosthodontics, dental radiology, pathology, oral implantology, dental anesthesia, dentofacial orthopedics, and oral medicine.
	19.02 Assemble tray set-ups for general and specialty dental procedures.
	19.03 Assist in general and specialty dental procedures.
	19.04 Describe the special needs of patients during dental procedures.
	19.05 Perform patient education to include pre- and post-operative instructions as prescribed by a dentist.
	19.06 Describe procedures, equipment, and materials utilized in digital dentistry to include CAD/CAM and intraoral scanning technology.
	19.07 Identify, describe, and demonstrate the uses and principles of phlebotomy as they pertain to dentistry.
	19.08 Identify, describe, and demonstrate the properties, uses, and principles of autologous blood concentrates as they pertain to dentistry.

Course Number: DEA0728 Occupational Completion Point: C Dental Assisting 2 – 465 Hours	
20.0	Describe principles and perform techniques of preventive dentistry. The student will be able to:
	20.01 Describe the process of oral biofilm formation and its management through preventative dentistry.
	20.02 Provide patient preventive education and oral hygiene instruction.
	20.03 Identify, communicate, and instruct patients on applicable methods of preventative dentistry that utilize: • Risk assessment • Evidence-based learning • Individualized preventive care plans • Motivational interviewing/counseling
	20.04 Training regarding health status and rationale for preventive care plan.
	20.05 Prepare and set up for various preventative procedures.
	20.06 Identify properties and uses of abrasive agents used to polish coronal surfaces and appliances.
	20.07 Perform coronal polish and apply anticariogenic and desensitizing treatments as permitted by Florida Statute and Florida Board of Dentistry Rule.

	20.08 Clean and polish removable dental appliances.
	20.09 Apply dental sealants as permitted by Florida Statute and Florida Board of Dentistry Rule.
	20.10 Identify the elements of nutrition, basic food groups, and acceptable diets as recommended by the U.S. Department of Agriculture.
	20.11 Identify dietary deficiencies and dietary practices that contribute to the manifestation of symptoms in the oral cavity.
	20.12 Describe the metabolism of nutrient foods, vitamins, and minerals by the human body and pathological conditions related to nutrient deficiencies.
	20.13 Identify community dental resources and services available.
	20.14 Understand the dynamics of preventive dentistry in the dental public health setting.
21.0	Perform general dental business office procedures. The student will be able to:
	21.01 Maintain appointment control.
	21.02 Assess, create, modify, and maintain an active re-care system.
	21.03 Prepare and maintain accurate patient records.
	21.04 Prepare and maintain patient financial records and collect fees.
	21.05 Demonstrate the use of dental procedure codes and current terminology when preparing and managing insurance claims.
	21.06 Differentiate the different categories of dental procedure codes.
	21.07 Prepare and maintain dental office inventory control and purchasing.
	21.08 Demonstrate public relations responsibilities of the secretary/receptionist.
	21.09 Demonstrate skills on office equipment to include computers and dental office management practice software.
	21.10 Maintain the dental business office environment.
	21.11 Receive and dismiss patients and visitors.
	21.12 Demonstrate appropriate patient management/customer service skills.
	21.13 Demonstrate and maintain office financial records and budgets.
	21.14 Describe the effect of money management on practice goals.
22.0	Demonstrate professionalism as a dental team member in the clinical setting. The student will be able to:

22.01	Perform dental assisting duties, dental assisting expanded functions, and dental radiographic procedures in a clinical setting under the direct supervision of a licensed dentist.
22.02	Interact with a professional dental team in the delivery of patient services.
22.03	Utilize employability skills.
22.04	Develop and maintain a professional portfolio to document knowledge, continued education, skills, and experience.
22.05	Write an appropriate resume.
22.06	Conduct a job search and complete a job application correctly.
22.07	Demonstrate effective job interview techniques.
22.08	Examine levels of education and credentialing requirements, including licensure and certification, employment opportunities, workplace environments, and career growth potential.

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as experimental, quality, and safety procedures, are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate, and troubleshoot equipment/tools used to make observations. Students understand measurement error and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

Field Internship Activities: Clinical experiences are integrated with the didactic portion of this program. Clinical experience assisting a dentist must be an integral part of the educational program designed to perfect students' competence in performing dental assisting functions, rather than to provide basic instruction. The major portion of the students' time in clinical assignments must be spent assisting with or participating in patient care. Prior to clinical assignments, students demonstrate minimum competence in performing the procedures which they will be expected to perform in their clinical experience.

Special Notes

Dental assisting programs accredited by the American Dental Association Commission on Dental Accreditation are required to implement enrollment and admissions criteria that include the selection of adult students with a high school diploma, its equivalent, or an advanced degree.

This program focuses on broad, transferable skills and stresses understanding and demonstration of the following elements of the health care industry; planning, management, finance, technical and production skills, underlying principles of technology, labor issues, community issues and health, safety, and environmental issues.

For Florida information contact the Florida Agency for Health Care Administration (AHCA), Division of Health Quality Assurance, Board of Dentistry, 4052 Bald Cypress Way, Tallahassee, FL 32399, (850) 245-4161.

This program meets the Department of Health's education requirements for HIV/AIDS, Domestic Violence and Prevention of Medical Errors. Although not a requirement for initial licensure, it is a requirement for renewal, therefore the instructor **may** provide a certificate for renewal purposes to the student verifying these requirements have been met.

If students in this program are seeking a licensure, certificate or registration through the Department of Health, please refer to 456.0635, F.S. for more information on disqualification for a license, certificate, or registration through the Department of Health.

Pursuant to 466.024, F.S.; 64B5-16.002, F.A.C. and 64B5-9.011, F.A.C., completers of the dental assisting program may be awarded a certificate verifying formal training which is required for the performance of certain remediable tasks (also known as expanded functions).

Students should be encouraged to become members and participate in the activities of the professional organization: The American Dental Assistants Association.

Completers of the dental assisting program should be encouraged to take the Dental Assisting National Board (DANB) Certified Dental Assistant (CDA) exam. DANB is recognized by the American Dental Association as the national certification board for dental assistants.

Career and Technical Student Organization (CTSO)

CTSOs are co-curricular career and technical student organizations providing leadership training and reinforcing specific career and technical skills. Career and Technical Student Organizations provide activities for students as an integral part of the instruction offered. Other CTSOs not listed in this curriculum framework or recognized by the Florida Department of Education are permissible provided they support student mastery over the standards and benchmarks of this curriculum framework.

Cooperative Training – OJT

On-the-job training is appropriate but not required for this program. Whenever offered, the rules, guidelines, and requirements specified in the OJT framework apply.

Basic Skills

In Career Certificate programs offered for 450 hours or more, in accordance with Rule 6A-10.040, F.A.C., the minimum basic skills grade levels required for postsecondary adult career and technical students to complete this program are: Computation (Mathematics) and Communications (Reading and Language Arts). These grade level numbers correspond to a grade equivalent score obtained on a state designated basic skills examination.

Adult students with disabilities, as defined in Section 1004.02, F.S., may be exempted from meeting the Basic Skills requirements (Rule 6A-10.040, F.A.C.). Students served in exceptional student education (except gifted) as defined in s. 1003.01, F.S., may also be exempted from meeting the Basic Skills requirement. Each school district and Florida College System Institution must adopt a policy addressing procedures for exempting eligible students with disabilities from the Basic Skills requirement as permitted in Section 1004.91, F.S.

Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

Note: postsecondary curriculum and regulated secondary programs cannot be modified.

Florida Department of Education
Curriculum Framework

Program Title: **Health Unit Coordinator/ Monitor Technician**
Program Type: **Career Preparatory**
Career Cluster: **Health Science**

Career Certificate Program		
Program Number	H170107	
CIP Number	0351070302	
Grade Level	30, 31	
Program Length	630 hours	
Teacher Certification	Refer to the **Program Structure** section.	
CTSO	HOSA	
SOC Codes (all applicable)	For program SOC codes, please see the Program and Course Tables section of the CTE Program Resources page linked below.	
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml	
Basic Skills Level	Computation (Mathematics): 9	Communications (Reading and Language Arts): 10

Purpose

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Health Science career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of Health Science career cluster.

The content includes but is not limited to interpersonal skills, medical terminology, legal and ethical responsibilities, safe and efficient work practices, clerical skills, safety and security use of computers, interpretation and transcription of doctors' orders, and employability skills.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Program Structure

This program is a planned sequence of instruction consisting of 3 occupational completion points.

This program is comprised of courses which have been assigned course numbers in the SCNS (Statewide Course Numbering System) in accordance with Section 1007.24 (1), F.S. Career and Technical credit shall be awarded to the student on a transcript in accordance with Section 1001.44(3) (b), F.S.

To teach the courses listed below, instructors must hold at least one of the teacher certifications indicated for that course.

The following table illustrates the postsecondary program structure:

OCP	Course Number	Course Title	Teacher Certification	Length
A	HSC0003	Basic Healthcare Worker	REG NURSE 7 G MED RECTEC 7G	90 hours
B	HIM0076	Health Unit Clerk		410 hours
C	HIM0090	Monitor Technician		130 hours

Florida's Career Readiness Skills for CTE Programs

Employability Skills	
01.0	Apply academic skills to workplace scenarios.
01.01	Use reading skills.
01.02	Use writing skills.
01.03	Use mathematical strategies and procedures.
01.04	Use scientific principles and procedures.
02.0	Design a solution to an industry problem.
02.01	Use critical thinking.
02.02	Use creativity.
02.03	Make sound decisions.
02.04	Solve problems.
02.05	Reason.
02.06	Plan and organize.
03.0	Manage resources within an industry project
03.01	Manage time.
03.02	Manage money or resources.
03.03	Manage materials.
03.04	Manage personnel.
04.0	Oversee the subcomponents, operations and output of a technical or organizational system.
04.01	Manage systems.
04.02	Monitor systems.
04.03	Improve systems.
05.0	Use information for decision making.
05.01	Locate information.
05.02	Organize information.
05.03	Use information.

	05.04 Analyze information.
	05.05 Communicate information.
06.0	Apply relevant technology to workplace scenarios to aid productivity.
	06.01 Use technology.
07.0	Interpret and express interpersonal communication.
	07.01 Communicate verbally.
	07.02 Listen actively.
	07.03 Comprehend written material.
	07.04 Convey information in writing.
	07.05 Communicate nonverbally.
	07.06 Interpret nonverbal communication.
08.0	Interact with others to accomplish workplace goals.
	08.01 Collaborate with others in a team.
	08.02 Respond to customer needs.
	08.03 Exercise leadership.
	08.04 Negotiate to resolve conflict.
	08.05 Respect others.
09.0	Manage personal behavior to maximize productivity and professional growth.
	09.01 Demonstrate responsibility and self-discipline.
	09.02 Adapt and show flexibility.
	09.03 Work independently.
	09.04 Demonstrate a willingness to learn.
	09.05 Demonstrate integrity.
	09.06 Demonstrate professionalism.
	09.07 Take initiative.
	09.08 Display positive attitude.
	09.09 Take responsibility for professional growth.

Job Attainment	
10.0	Find, assess and apply to job opportunities.
10.01	Identify online job posts relevant to his or her career aspirations.
10.02	Compare and contrast the job posts' required qualifications, job duties, compensation, benefits and employers.
10.03	Define what information, documentation and writing prompts are required for the positions.
11.0	Communicate personal competence, character and fit for a job opportunity.
11.01	Develop a resume.
11.02	Write a cover letter.
11.03	Curate a professional portfolio that includes work products.
11.04	Prepare for and experience a mock job interview.
12.0	Cultivate and leverage relationships to professionally advance.
12.01	Request a signed reference letter, letter of recommendation and/or an online skill/professionalism endorsement.
12.02	Develop a plan to cultivate a professional digital footprint.
12.03	Develop a networking plan for a specific industry of interest.

Standards

After successfully completing this program, the student will be able to perform the following:

01.0 Demonstrate knowledge of the healthcare delivery system and health occupations.
02.0 Demonstrate the ability to communicate and use interpersonal skills effectively.
03.0 Demonstrate legal and ethical responsibilities.
04.0 Demonstrate an understanding of and apply wellness and disease concepts.
05.0 Recognize and practice safety and security procedures.
06.0 Recognize and respond to emergency situations.
07.0 Recognize and practice infection control procedures.
08.0 Demonstrate an understanding of information technology applications in healthcare.
09.0 Demonstrate employability skills.
10.0 Demonstrate knowledge of blood borne diseases, including HIV/AIDS.
11.0 Apply basic math and science skills.
12.0 Use oral and written communication skills in creating, expressing and interpreting information and ideas.
13.0 Describe the importance of professional ethics and legal responsibilities for the Health Unit Coordinator.
14.0 Interpret and apply medical terminology specific to health unit clerks.
15.0 Organize and maintain efficient work practices.
16.0 Perform clerical duties.
17.0 Perform patient admission, transfer and discharge procedures.
18.0 Prepare discharge/transfer chart for medical records/new unit.
19.0 Demonstrate the importance of health, safety, and environmental management systems in organizations and their importance to organizational performance and regulatory compliance.
20.0 Read, interpret, process, coordinate and transcribe physicians' orders.
21.0 Demonstrate an understanding of the Health Unit Coordinators role in the Nutritional Care Department.
22.0 Demonstrate an understanding of the Health Unit Coordinators role in processing diagnostic orders.
23.0 Explain the importance of employability skills and entrepreneurship skills for the Health Unit Coordinator.
24.0 Describe the cardiovascular system.
25.0 Identify legal and ethical responsibilities of an EKG Monitor Technician.
26.0 Demonstrate knowledge of, apply and use medical instrumentation modalities.
27.0 Perform patient care techniques in the health care facility.
28.0 Recognize normal and abnormal cardiac telemetry monitoring results.
29.0 Describe common cardiovascular drugs, their actions, use and adverse effects.
30.0 Set up telemetry monitoring, interpret and report abnormal rhythms to the nurse.
31.0 Monitoring, interpreting and reporting abnormal rhythms (dysrhythmias) to the nurse.

Florida Department of Education
Student Performance Standards

Program Title: **Health Unit Coordinator**
Career Certificate Program Number: **H170107**

The **Basic Health Care Worker (HSC0003)** is referred to as the **Health Science Core** and is the first OCP in the majority of the Career Certificate Program health science programs. Secondary and Postsecondary students completing the health science core will not have to repeat the core in any other health science program in which it is a part. When the recommended sequence is followed, the structure allows students to complete at specified points for employment or remain for advanced training or cross-training.

Course Number: HSC0003
Occupational Completion Point: A
Basic Healthcare Worker – 90 Hours

To ensure consistency whenever these courses are offered, the health science core standards (1-11) and benchmarks have been placed in a separate document. To access this document, visit this link:
https://www.fldoe.org/file/20894/health-sci-core-psav-cc-2627.rtf

Course Number: HIM0076
Occupational Completion Point: B
Health Unit Clerk – 410 Hours

12.0	Use oral and written communication skills in creating, expressing and interpreting information and ideas. The student will be able to:	
	12.01	Apply basic speaking and active listening skills including reflection, restatement, and clarification techniques when using the telephone and answering patient call lights.
	12.02	Recognize the importance of courtesy and respect for patients and other health care workers and maintain good interpersonal relationships.
	12.03	Adapt communication skills to varied levels of understanding and cultural orientation including diverse age, cultural, economic, ethnic, and religious groups.
	12.04	Apply active listening skills to obtain and clarify information.
	12.05	Exhibit public relations skills that aid in achieving customer satisfaction including face to face interactions.
	12.06	Explain why implementation of the electronic medical record is requiring advanced communication skills for the health unit coordinator (HUC).
	12.07	Give instances that exemplify human needs, classify each according to Maslow's hierarchy of human needs, and give appropriate responses to meet the listed needs.
	12.08	Define and explain the importance of culturally sensitive care in the health care setting.

	12.09 List five guidelines to follow that could improve intercultural communication.
13.0	Describe the importance of professional ethics and legal responsibilities for the Health Unit Coordinator. The student will be able to:
	13.01 List seven patient rights as outlined in HIPAA.
	13.02 Identify seven patient identifiers (individually identifiable health information [IIHI]).
	13.03 Explain two purposes of the Health Information Technology for Economic and Clinical Health (HITECH) Act.
	13.04 Explain the responsibilities the health unit coordinator (HUC) has for HIPAA compliance.
	13.05 Evaluate alternative responses to workplace situations based on personal, professional, ethical, legal responsibilities, and employer policies.
14.0	Interpret and apply medical terminology specific to health unit clerks. The student will be able to:
	14.01 Identify components of medical terms.
	14.02 Spell, pronounce, and define medical terms as related to Health Unit Coordinator.
	14.03 Relate medical terminology to the body systems.
	14.04 Identify and define standard abbreviations and medical symbols.
	14.05 Identify apothecary and metric systems.
15.0	Organize and maintain efficient work practices. The student will be able to:
	15.01 Arrange daily activities by priority.
	15.02 Prepare and post unit information lists.
	15.03 Maintain a supply of assembled medical/surgical admission packets when using paper charts or standard forms.
	15.04 Distribute forms and articles from in-basket.
	15.05 Identify, store and maintain unit equipment/supplies in a neat and orderly manner.
	15.06 Sanitize nursing station equipment.
	15.07 Maintain par levels of supplies as required by the nursing unit
	15.08 Greet all visitors to the nursing unit and offer assistance as necessary.
16.0	Perform clerical duties. The student will be able to:

16.01	Demonstrate knowledge of common software applications relevant to the role of the health unit coordinator.
16.02	Prepare, label and add forms to chart.
16.03	Record non-clinical admission data on unit records.
16.04	Obtain previous admission records/X-rays.
16.05	Post all reports on charts.
16.06	File and retrieve assorted forms.
16.07	Maintain patient tracking for patients leaving the unit (electronic or paper log).
16.08	Conduct “down time” procedure when electronic record program is unavailable due to scheduled downtime or unexpected downtime.
17.0	Perform patient admission, transfer and discharge procedures. The student will be able to:
17.01	List four types of admissions and three types of patients.
17.02	List the common components of a set of admission orders and common health unit coordinator (HUC) tasks regarding the patient’s admission when paper charts are used.
17.03	Describe how a surgical patient’s admission orders differ from a medical patient’s admission orders and discuss three options for the way in which patient surgeries are performed.
17.04	List the components that may be included in a set of pre/postoperative orders.
17.05	Explain why it is important for the HUC to monitor the patient’s electronic medical record (EMR) consistently.
17.06	Explain the purpose and the benefits of the electronic patient status tracking board for the patient’s family and/or friends.
17.07	Explain what the HUC’s responsibility would be regarding all medical records, including patient signed consent forms, handwritten progress notes, and reports faxed or sent from other facilities or brought in by a patient when the EMR with computer physician order entry (CPOE) is implemented.
18.0	Prepare discharge/transfer chart for medical records/new unit. The student will be able to:
18.01	List the different types of discharges and explain the importance of communicating pending discharge information and bed availability to the admitting department or bed placement in a timely manner.
18.02	List the tasks that may be required to complete a routine discharge.
18.03	List the additional tasks that may be required when a patient is discharged to another facility, discharged home with assistance, or when a patient dies (postmortem).
18.04	Describe the tasks necessary to prepare the discharged patient’s medical record for the health information management services (HIMS) department when paper charts are used.

	18.05 List the tasks that are performed when a patient is transferred from one unit to another.
	18.06 List the tasks performed by the HUC when a patient is transferred from one room to another room on the same unit.
	18.07 Discuss the importance of reading the entire set of discharge or transfer orders prior to the patient being discharged or transferred.
19.0	Demonstrate the importance of health, safety, and environmental management systems in organizations and their importance to organizational performance and regulatory compliance. The student will be able to:
	19.01 Describe personal and jobsite safety rules and regulations that maintain safe and healthy work environments.
	19.02 Participate in emergency or disaster plan, CPR and first aid.
	19.03 Identify the location of emergency equipment on the nursing unit.
	19.04 Recognize and follow all appropriate emergent code protocols.
	19.05 Comply with regulatory agency guidelines.
20.0	Read, interpret, process, coordinate and transcribe physicians' orders. The student will be able to:
	20.01 Identify all types of physician's orders.
	20.02 Prioritize orders for transcription.
	20.03 Prepare and route requisitions manually or via computer.
	20.04 Arrange for ordered consultations.
	20.05 Schedule patients' treatments or therapy with other hospital departments.
21.0	Demonstrate an understanding of the Health Unit Coordinators role in the Nutritional Care Department. The student will be able to:
	21.01 Explain the importance of communicating diet changes and patient food allergies to the nutritional care department.
	21.02 List the groups of diets including nutritional supplements that may be ordered for the hospitalized patient.
	21.03 List consistency changes that can be made to a standard diet and explain what is included in each.
	21.04 List diet options that may be selected for the patient who has started on clear liquids and has an order for diet as tolerated and explain how the selection would be made.
	21.05 Identify therapeutic diets that the patient’s doctor may order.
	21.06 Identify diets that may be requested by patients and assist them in ordering appropriate meals.

	21.07 List the items an HUC may need to order when transcribing an order for tube feeding.
	21.08 Explain the purpose of the doctors' orders force fluids, limit fluids, and calorie count.
	21.09 Discuss the importance of sending all doctors' orders regarding a patient's diet or modifications to a patient's diet to the nutritional care department.
	21.10 Discuss the importance of sending total parenteral nutrition (TPN) orders to the pharmacy in a timely manner via fax, pneumatic, or dumb waiter system.
22.0	Demonstrate an understanding of the Health Unit Coordinators role in processing diagnostic orders. The student will be able to:
	22.01 List the major divisions of the clinical laboratory and their functions.
	22.02 List six invasive procedures that would require a consent form signed by the patient.
	22.03 Describe the health unit coordinator's responsibilities in ordering laboratory tests and sending specimens to the laboratory when EMR is used and when paper charts are used and describe how routine, stat, daily, and timed studies would be ordered and performed.
	22.04 Explain how the health unit coordinator's responsibilities regarding diagnostic imaging orders differ with the implementation of the electronic medical record and computer physician order entry versus use of the paper chart.
	22.05 List the required patient information needed when ordering procedures to be performed by the diagnostic imaging department.
	22.06 Explain when a patient would be required to sign an informed consent before a diagnostic imaging procedure.
	22.07 Discuss sequencing or scheduling of multiple diagnostic imaging procedures ordered for the same patient.
	22.08 Demonstrate an understanding of other diagnostic studies.
23.0	Explain the importance of employability skills and entrepreneurship skills for the Health Unit Coordinator. The student will be able to:
	23.01 Discuss benefits and responsibilities of the HUC as a member of a professional organization.
	23.02 List five benefits of becoming a certified HUC.
	23.03 List three positions in which the HUC may be cross-trained.
	23.04 Compose written communication including emails using correct spelling, grammar, formatting and confidentiality.
	23.05 Observe professional e-mail practices and etiquette.

Course Number: HIM0090 Occupational Completion Point: C Monitor Technician – 130 Hours	
24.0	Describe the cardiovascular system. The student will be able to:
24.01	Locate the heart and surrounding structures.
24.02	Using a diagram label the parts of the heart and list the functions of each labeled part.
24.03	Trace the flow of blood through the cardiopulmonary system.
24.04	Identify and describe the electrical conduction system.
25.0	Identify legal and ethical responsibilities of an EKG Monitor Technician. The student will be able to:
25.01	Recognize and practice legal and ethical responsibilities as they relate to an EKG Monitor Tech.
25.02	Maintain a safe and efficient work environment.
25.03	Maintain EKG monitoring equipment so it will be safe and accurate.
25.04	Implement appropriate monitoring of hospital patient safety goals.
26.0	Demonstrate knowledge of, apply, and use medical instrumentation modalities. The student will be able to:
26.01	Operate cardiac telemetry monitoring equipment related to admitting and discharging patients, trending, changing alarm parameters, changing leads and changing cardiac monitoring paper.
26.02	Troubleshooting monitor equipment, cleaning and maintaining monitoring equipment.
26.03	Identify three types of lead systems.
26.04	Describe correct anatomic placement of standard limb, augmented, and chest (precordial) leads.
26.05	List three common causes of artifact and the techniques to correct them.
26.06	Recognize normal sinus rhythm.
26.07	Report any rhythm that is not normal sinus rhythm.
26.08	List the three leads that form Einthoven’s triangle.
26.09	Recognize a cardiac emergency as seen on the EKG monitor and explain the importance of rapid reporting.
27.0	Perform patient care techniques in the health care facility. The student will be able to:

	27.01 Verify requisition order with patient identification band.
	27.02 Identify patient utilizing name, date of birth, and medical and/or financial number.
	27.03 Prepare the patient for lead placement.
28.0	Recognize normal and abnormal cardiac telemetry monitoring results. The student will be able to:
	28.01 Consistently apply a systematic approach to analyze and interpret heart rhythm strips.
	28.02 Identify and examine wave forms, segments, and complexes.
	28.03 Measure PRI, QRS, QTI, and calculate heart rate.
	28.04 Explain the process of evaluating ECG tracings to determine the presence of dysrhythmias.
	28.05 List indications for pacemaker insertion, pacemaker modalities.
	28.06 Recognize normal pacemaker rhythms and malfunctions such as pacemaker failure to fire, failure to capture, over-sensing, and under-sensing.
	28.07 Recognize sinus rhythms including sinus bradycardia, sinus tachycardia, sinus arrhythmia, and sinus pause.
	28.08 Recognize atrial dysrhythmias including atrial tachycardia, atrial fibrillation, atrial flutter, and atrial ectopic beats.
	28.09 Recognize junctional dysrhythmias including junctional rhythm, accelerated junctional, junctional tachycardia, and junctional ectopic beats.
	28.10 Recognize supra ventricular tachycardia.
	28.11 Identify all Heart Blocks including 1st Degree, 2nd Degree Type I, 2nd Degree Type II, Third Degree, and Bundle Branch Blocks.
	28.12 Recognize all lethal cardiac dysrhythmias including Ventricular Tachycardia, Ventricular Fibrillation, and Asystole.
	28.13 Recognize ECG changes that indicate the presence of myocardial ischemia or infarction.
	28.14 Explain the importance of notifying the nurse immediately when ischemic or infarct ECG changes are identified.
	28.15 Identify ECG wave morphology that indicate atrial or ventricular hypertrophies.
	28.16 Recognize ECG changes that indicate premature atrial, junctional, and ventricular complexes and other rare phenomena.
29.0	Describe common cardiovascular drugs, their actions, use and adverse effects. The student will be able to:
	29.01 List common cardiovascular drugs and their common adverse effects including ECG changes if applicable.

	29.02 Identify and observe a cardiac emergency.
30.0	Set up telemetry monitoring, interpret and report abnormal rhythms to the nurse. The student will be able to:
	30.01 Apply and turn on telemetry unit and set alarm parameters according to facility policy.
	30.02 Identify lethal arrhythmias and actions required.
	30.03 Enter and maintain patient identity and location while in telemetry according to patient reconciliation procedures.
	30.04 Identify the PRI, QRS, QTI, T waves, and heart rate.
31.0	Monitoring, interpreting and reporting abnormal rhythms (dysrhythmias) to the nurse. The student will be able to:
	31.01 Oversee cardiac rhythms for dysrhythmias and report to the nurse.
	31.02 Examine rhythm strips for clarity and artifact. Record and documents heart rhythm strips per unit policy.
	31.03 Identify three types of artifacts and initiates actions to correct them.
	31.04 Replace electrodes and apply lead wires using the correct landmarks.
	31.05 Records rhythm and documents time of events during cardiac arrest situations, cardioversion procedures, and emergency medication administration as directed by the nurse.
	31.06 Maintain constant communication with the nurse during patient emergency situations.

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as, experimental, quality, and safety procedures are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate and troubleshoot equipment/tools used to make observations. Students understand measurement error; and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

Special Notes

Transcription of physicians' orders is an integral part of this course. This competency is achieved through simulated practice with standard equipment and supplies used in a health care facility by the health unit coordinator. An overview of anatomy and physiology serves as a foundation for medical terminology and CPR/first aid. A working knowledge of the computer is a competency achieved through actual practice. Role playing is one of the methods which can be used for developing interpersonal skills.

Supervised clinical experience is an integral part of this program.

This program meets the Department of Health's education requirements for HIV/AIDS, Domestic Violence and Prevention of Medical Errors. Although not a requirement for initial licensure, it is a requirement for renewal, therefore the instructor **may** provide a certificate for renewal purposes to the student verifying these requirements have been met.

If students in this program are seeking a licensure, certificate or registration through the Department of Health, please refer to 456.0635, F.S. for more information on disqualification for a license, certificate, or registration through the Department of Health.

It is recommended that completers of this program take the National Association of Health Unit Coordinators Certification examination which is offered annually.

The Core should be taken first in the program. Following the successful completion of the core, the student is eligible to take the National Health Care Foundation Skill Standards Assessment with instructor approval and the completion of a portfolio.

Career and Technical Student Organization (CTSO)

CTSOs are co-curricular career and technical student organizations providing leadership training and reinforcing specific career and technical skills. Career and Technical Student Organizations provide activities for students as an integral part of the instruction offered. Other CTSOs not listed in this curriculum framework or recognized by the Florida Department of Education are permissible provided they support student mastery over the standards and benchmarks of this curriculum framework.

Cooperative Training – OJT

On-the-job training is appropriate but not required for this program. Whenever offered, the rules, guidelines, and requirements specified in the OJT framework apply.

Basic Skills

In Career Certificate programs offered for 450 hours or more, in accordance with Rule 6A-10.040, F.A.C., the minimum basic skills grade levels required for postsecondary adult career and technical students to complete this program are: Computation (Mathematics) and Communications (Reading and Language Arts). These grade level numbers correspond to a grade equivalent score obtained on a state designated basic skills examination.

Adult students with disabilities, as defined in Section 1004.02, Florida Statutes, may be exempted from meeting the Basic Skills requirements (Rule 6A-10.040). Students served in exceptional student education (except gifted) as defined in s. 1003.01, F.S., may also be exempted from meeting the Basic Skills requirement. Each school district and Florida College System Institution must adopt a policy addressing procedures for exempting eligible students with disabilities from the Basic Skills requirement as permitted in Section 1004.91, F.S.

Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

Note: postsecondary curriculum and regulated secondary programs cannot be modified.

Florida Department of Education
Curriculum Framework

No new students may be enrolled in this program starting 2026-27. The last year to report any enrollment is 2028-29. This program was replaced by Dental Laboratory Technology H700100 (0351060307).

Program Title: **Dental Laboratory Technology**
Program Type: **Career Preparatory**
Career Cluster: **Health Science**

Career Certificate Program		
Program Number	H170108	
CIP Number	0351060306	
Grade Level	30, 31	
Program Length	2040 Hours	
Teacher Certification	Refer to the **Program Structure** section.	
CTSO	HOSA	
SOC Codes (all applicable)	For program SOC codes, please see the Program and Course Tables section of the CTE Program Resources page linked below.	
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml	
Basic Skills Level	Computation (Mathematics): 9	Communications (Reading and Language Arts): 9

Purpose

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Health Science career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of Health Science career cluster.

The program is designed to prepare students for entry level employment as dental laboratory technicians, denture technicians crown & bridge technicians, ceramic & technicians or to provide supplemental training for persons previously or currently employed in this occupation.

The content of the program includes, but is not limited to, general studies, physical sciences, dental sciences, and dental laboratory techniques.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Program Structure

This program is a planned sequence of instruction consisting of 6 occupational completion points.

This program is comprised of courses which have been assigned course numbers in the SCNS (Statewide Course Numbering System) in accordance with Section 1007.24 (1), F.S. Career and Technical credit shall be awarded to the student on a transcript in accordance with Section 1001.44(3) (b), F.S.

To teach the courses listed below, instructors must hold at least one of the teacher certifications indicated for that course.

The following table illustrates the post-secondary program structure:

OCP	Course Number	Course Title	Teacher Certification	Length
A	DTE0400	Orientation to Dental Laboratory Technology	DEN LABTEC 7G	18 hours
	DTE0433	Denture Technician 1		319 hours
B	DTE0434	Denture Technician 2		319 hours
C	DTE0435	Advanced Denture Technician		349 hours
D	DTE0441	Crown and Bridge Technician		285 hours
E	DTE0461	Ceramic Technician		285 hours
F	DTE0451	Implant, Attachment & Hybrid Restoration Technician		285 hours
G	DTE0481	Master Dental Laboratory Technician		180 hours

Florida's Career Readiness Skills for CTE Programs

Employability Skills	
01.0	Apply academic skills to workplace scenarios.
	01.01 Use reading skills.
	01.02 Use writing skills.
	01.03 Use mathematical strategies and procedures.
	01.04 Use scientific principles and procedures.
02.0	Design a solution to an industry problem.
	02.01 Use critical thinking.
	02.02 Use creativity.
	02.03 Make sound decisions.
	02.04 Solve problems.
	02.05 Reason.
	02.06 Plan and organize.
03.0	Manage resources within an industry project
	03.01 Manage time.
	03.02 Manage money or resources.
	03.03 Manage materials.
	03.04 Manage personnel.
04.0	Oversee the subcomponents, operations and output of a technical or organizational system.
	04.01 Manage systems.
	04.02 Monitor systems.
	04.03 Improve systems.
05.0	Use information for decision making.
	05.01 Locate information.
	05.02 Organize information.
	05.03 Use information.

	05.04 Analyze information.
	05.05 Communicate information.
06.0	Apply relevant technology to workplace scenarios to aid productivity.
	06.01 Use technology.
07.0	Interpret and express interpersonal communication.
	07.01 Communicate verbally.
	07.02 Listen actively.
	07.03 Comprehend written material.
	07.04 Convey information in writing.
	07.05 Communicate nonverbally.
	07.06 Interpret nonverbal communication.
08.0	Interact with others to accomplish workplace goals.
	08.01 Collaborate with others in a team.
	08.02 Respond to customer needs.
	08.03 Exercise leadership.
	08.04 Negotiate to resolve conflict.
	08.05 Respect others.
09.0	Manage personal behavior to maximize productivity and professional growth.
	09.01 Demonstrate responsibility and self-discipline.
	09.02 Adapt and show flexibility.
	09.03 Work independently.
	09.04 Demonstrate a willingness to learn.
	09.05 Demonstrate integrity.
	09.06 Demonstrate professionalism.
	09.07 Take initiative.
	09.08 Display positive attitude.
	09.09 Take responsibility for professional growth.

Job Attainment	
10.0	Find, assess and apply to job opportunities.
10.01	Identify online job posts relevant to his or her career aspirations.
10.02	Compare and contrast the job posts' required qualifications, job duties, compensation, benefits and employers.
10.03	Define what information, documentation and writing prompts are required for the positions.
11.0	Communicate personal competence, character and fit for a job opportunity.
11.01	Develop a resume.
11.02	Write a cover letter.
11.03	Curate a professional portfolio that includes work products.
11.04	Prepare for and experience a mock job interview.
12.0	Cultivate and leverage relationships to professionally advance.
12.01	Request a signed reference letter, letter of recommendation and/or an online skill/professionalism endorsement.
12.02	Develop a plan to cultivate a professional digital footprint.
12.03	Develop a networking plan for a specific industry of interest.

Standards

After successfully completing this program, the student will be able to perform the following:

01.0 Identify the anatomic structure and function of body systems in relation to prosthetic services performed by the dental laboratory technician.
02.0 Practice quality assurance, safety and infection control.
03.0 Adhere to legal and ethical principles related to the practice of dental laboratory technology.
04.0 Demonstrate knowledge of effective business management techniques.
05.0 Demonstrate knowledge of dental sciences.
06.0 Demonstrate knowledge of physical and mechanical properties of metals and alloys.
07.0 Manufacture various methods of complete denture construction.
08.0 Manufacture complete denture construction on practical work received from dental clinic.
09.0 Manufacture and identify components of a removable partial denture.
10.0 Manufacture orthodontic and pedodontic appliances.
11.0 Demonstrate knowledge and skills required to manufacture single and multi-unit restorations.
12.0 Perform basic occlusion, determinants of occlusal morphology and physiology of mandibular movements.
13.0 Manufacture restorations in the student's specialty for patients who receive treatment at the dental research clinic.
14.0 Demonstrate knowledge of basic concepts of porcelain-fused-to-metal (PFM) techniques.
15.0 Demonstrate proper design and fabrication for individual and three-unit anterior bridge for pressable system restorations.
16.0 Demonstrate proper design and fabrication for all Ceramics Restorations using Refractory System.
17.0 Demonstrated knowledge of the Standard Components for Implant Systems.
18.0 Demonstrate proper design and fabrication for Implants System.
19.0 Describe the Standard Components and fabrication of semi precision attachments.
20.0 Demonstrate proper design and fabrication of Hybrid Restoration.
21.0 Specialization Removable Appliances: Demonstrate their skills in removable dentures on specific projects.
22.0 Perform select proficiency in fixed restorative techniques in chosen areas of specialization.

Florida Department of Education
Student Performance Standards

Program Title: **Dental Laboratory Technology**
Career Certificate Program Number: **H170108**

Course Number: DTE0400 **Occupational Completion Point: A** **Orientation to Dental Laboratory Technology – 18 Hours**	
01.0	Identify the anatomic structure and function of body systems in relation to prosthetic services performed by the dental laboratory technician. The student will be able to:
01.01	Identify structures and functions of head and neck anatomy.
01.02	Identify embryonic development of head, oral cavity and individual teeth.
01.03	Identify each tooth and its landmarks.
02.0	Practice quality assurance, safety, and infection control. The student will be able to:
02.01	Practice safety in accordance with institutional policy.
02.02	Identify documentation procedures necessary to comply with state laws.
02.03	Demonstrate knowledge of the dental laboratory technician's role in providing quality assurance in laboratory procedures, reporting, and use and maintenance of equipment.
02.04	Use appropriate dental terminology and abbreviations.
02.05	Demonstrate knowledge, principles, and methods of disease transmission and prevention as related to dental prostheses.
02.06	Demonstrate knowledge of infection control in dental laboratories in accordance with Center for Disease Control (CDC)/OSHA guidelines.
02.07	Establish an infection control procedures policy for the dental laboratory.
03.0	Adhere to legal and ethical principles related to the practice of dental laboratory technology. The student will be able to:
03.01	Demonstrate knowledge of the importance of observing the doctor/technician relationship.
03.02	Demonstrate knowledge of state law governing the practice of Dental Laboratory Technology.
04.0	Demonstrate knowledge of effective business management techniques. The student will be able to:
04.01	Demonstrate knowledge and use of an office/laboratory procedure manual.

	04.02 Demonstrate knowledge and use of business finance and operating expenses.
	04.03 Demonstrate knowledge of pay scale and benefit program for employees and a bookkeeping system.
	04.04 Demonstrate knowledge of tax forms, payroll records, insurance needs and inventory needs.
	04.05 Demonstrate knowledge of employee hiring orientation.
	04.06 Demonstrate knowledge of computer applications in the dental laboratory.
Course Number: DTE0433 Occupational Completion Point: B Denture Technician 1 – 319 Hours	
05.0	Demonstrate knowledge of dental sciences. The student will be able to:
	05.01 Demonstrate knowledge of physical properties, use and manipulation of dental materials.
	05.02 Demonstrate knowledge of the dynamics of occlusion.
	05.03 Demonstrate problem-solving skills as related to dental materials.
06.0	Demonstrate knowledge of physical and mechanical properties of metals and alloys. The student will be able to:
	06.01 Identify how dental materials are affected by changes in the physical and mechanical properties of the materials.
	06.02 List characteristics of a metal.
	06.03 Identify the mechanical properties of cast alloys and cold worked metal, strain hardening, recrystallization, and grain growth.
	06.04 Identify the metals and percentages in all types of dental casting gold alloys and how different alloys of dental gold casting affect the dental restorations.
	06.05 Identify heat treatment techniques for dental casting gold alloys.
	06.06 List the types, composition and uses of dental solders.
	06.07 Identify composition and uses of dental fluxes and pickling agents.
	06.08 Identify composition, physical and mechanical properties and heat treatment techniques for base metal alloys, chrome cobalt and nickel chrome.
	06.09 Identify types of burs used in dentistry and the mechanics of cutting.
	06.10 Identify abrasion and polishing dentifrices used in the dental lab and how each affects the dental restoration.

Course Number: DTE0434 **Occupational Completion Point: B** **Denture Technician 2 – 319 Hours**	
07.0	Manufacture various methods of complete denture construction. The student will be able to:
07.01	Make casts by pouring all types of impression material to include dentulous and edentulous impressions.
07.02	Construct base plates by either the light cure and/ or thermoforming vacuum press.
07.03	Construct wax occlusion rims to exact specifications.
07.04	Articulate cast upon which complete dentures are to be made on 1 plain line and semi adjustable articulators.
07.05	Set-up and wax-up complete upper and lower dentures.
07.06	Manufacture temporary all-acrylic removable partial dentures.
07.07	Repair any and all types of dentures.
07.08	Manufacture immediate complete dentures complete with surgical tray.
07.09	Relining complete dentures (upper and lower).
07.10	Perform selective milling grinding in the finishing of complete dentures.
08.0	Manufacture complete denture construction on practical work received from dental clinic. The student will be able to:
08.01	Make stone or plaster casts by pouring all types of impressions, both dentulous and semi-edentulous impressions, be it alginate, rubber base or silicone.
08.02	Construct a light cure or thermoformed vacuum base plate and stabilized tray if so ordered on the prescription by the doctor.
08.03	Construct wax occlusal rim to exact measurements.
08.04	Be able to articulate casts on a plain line or semi-adjustable articulator.
08.05	Set-up and wax-up cases.
08.06	Invest, pack, cure, deflask, finish, and polish.
08.07	Repair dentures, flange, adding teeth, or clasp if needed to denture.
08.08	Reline any upper or lower denture.

Course Number: DTE0435 **Occupational Completion Point: C** **Advanced Denture Technician – 349 Hours**	
09.0	Manufacture and identify components of a removable partial denture. The student will be able to:
09.01	Survey and design maxillary and mandibular removable partial denture framework.
09.02	Block out and duplicate master cast.
09.03	Identify, explain, and use a variety of clasps.
09.04	Wax-up, sprue, invest, burnout and cast non-precious alloy frames.
09.05	Finish and polish metal frames and arrange artificial teeth.
09.06	Demonstrate the bending of wrought wire and perform various repairs.
10.0	Manufacture orthodontic and pedodontic appliances. The student will be able to:
10.01	Identify and describe various types of malocclusion as presented in the course.
10.02	Identify and know the treatment objectives of the orthodontic appliances presented in the course.
10.03	Interpret work authorization for orthodontic appliances.
10.04	Complete the assigned laboratory exercises in the course to the standard of clinically acceptable quality.
Course Number: DTE0441 **Occupational Completion Point: D** **Crown And Bridge Technician – 285 Hours**	
11.0	Demonstrate knowledge and skills required to manufacture single and multi-unit restorations. The student will be able to:
11.01	Pour impression to make casts with removable dies.
11.02	Articulate casts on a semi-adjustable articulator and use various types of articulation systems.
11.03	Prepare dies for waxing.
11.04	Manufacture wax patterns for inlays, onlays, full crowns, and multi-unit restorations.

	11.05 Demonstrate proper techniques in spruing, investing, and casting.
	11.06 Finish all metal cast restorations.
	11.07 Demonstrate a proper diagnostic wax-up for single and multi-unit restorations.
	11.08 Demonstrate the fabrication of provisional restoration using thermoforming vacuum or putty matrix methods.
	11.09 Construct a single and multi-unit restoration.
	11.10 Finish provisional restoration in an acceptable manner.
	11.11 Construct a post and core with a final restoration.
12.0	Perform basic occlusion, determinants of occlusal morphology and physiology of mandibular movements. The student will be able to:
	12.01 Identify fundamental occlusion patterning associated with the basic mandibular positions.
	12.02 Identify Dr. Angle's occlusal classifications.
	12.03 Identify cusp types from the functional point of view.
	12.04 Identify the incisal edges and cusps tips of maxillary teeth to mandibular teeth in centric occlusion.
	12.05 Demonstrate the correlation between maxillary and mandibular cusps.
	12.06 Demonstrate an understanding of mandibular movements.
	12.07 Demonstrate an understanding of functional occlusion.
13.0	Manufacture restorations in the student's specialty for patients who receive treatment at the dental research clinic. The student will be able to:
	13.01 Complete denture set-up, wax-up, and finish.
	13.02 Perform basic complete denture relines.
	13.03 Demonstrate knowledge of denture repairs.
	13.04 Removable partial denture wax-up, casting and finish.
	13.05 Manufacture a Hawley appliance.
	13.06 Manufacture space maintainer.
	13.07 Fabricate restorations to include: inlay, onlays, full crowns, bridges Porcelain Fused to Metal (PFM), and all ceramic restorations.

13.08	Manufacture prostheses for patients currently under treatment or from actual casts or impressions and occlusal records from previously fabricated prosthesis.
Course Number: DTE0461 Occupational Completion Point: E Ceramic Technician – 285 Hours	
14.0	Demonstrate knowledge of basic concepts of porcelain-fused-to-metal (PFM) techniques. The student will be able to:
14.01	Describe the components of dental porcelain.
14.02	Describe the early porcelain-fused-to-metal systems.
14.03	Identify various alloys used in the fabrication of PFM restorations.
14.04	Identify and explain the uses of opaque, body, incisal, modifier, glaze, and stain porcelains.
14.05	Demonstrate proper metal design for individual and multiple-unit PFM restorations.
14.06	Demonstrate proper spruing, investing, burnout, casting and metal finishing techniques.
14.07	Demonstrate proper and accurate pre-soldering skills.
14.08	Demonstrate proper and accurate post-soldering skills.
14.09	Describe the concept of degassing and metal porcelain bonding.
14.10	Demonstrate approved techniques for opaque, body and incisal porcelain application.
14.11	Identify various porcelain firing cycles.
14.12	Demonstrate approved techniques for contouring and glazing porcelain.
14.13	Describe the basic concepts of staining, the color wheel and hue, chroma and value.
14.14	Demonstrate and understanding of porcelain furnace calibration and maintenance.
15.0	Demonstrate proper design and fabrication for individual and three-unit anterior bridge for pressable system restorations. The student will be able to:
15.01	Demonstrate proper wax-up, spruing and investing.
15.02	Demonstrate proper burnout and pressing.
15.03	Demonstrate proper recovery/divesting of a pressed crown and bridge.

	15.04 Demonstrate proper finishing techniques of a pressed crown and bridge.
16.0	Demonstrate proper design and fabrication for all Ceramics Restorations using Refractory System. The student will be able to:
	16.01 Pour impression to make casts with removable dies.
	16.02 Fabricate inlays, onlays and veneers using the Refractory System.
Course Number: DTE0451 Occupational Completion Point: F Implant, Attachment & Hybrid Restoration Technician – 285 Hours	
17.0	Demonstrated knowledge of the Standard Components for Implant Systems. The student will be able to:
	17.01 List the standard components of an implant system including: • Implant/fixture • Healing Abutment Cover Screw/ Screw • Abutment • Temporary Components • Angulated Abutment • Impression Coping • Open tray/closed tray • Abutment replicas • Analogue/Implant Replica
18.0	Demonstrate proper design and fabrication for Implants System. The student will be able to:
	18.01 Demonstrate the fabrication of a Custom Tray for an Implant Case.
	18.02 Demonstrate the fabrication of a Surgical Guide Template.
	18.03 Demonstrate the pouring of an impression and fabricate a master cast with an abutment replica in place.
	18.04 Apply soft tissue silicone material around the abutment replica.
	18.05 Screw/Cement-Retained, castable substructure.
	18.06 Demonstrate proper substructure design: waxing, spruing, investing, burnout, casting and metal finishing techniques for Implant Systems.
	18.07 Demonstrate proper design and fabrication of a porcelain fused to metal crown over an implant abutment.
	18.08 Demonstrate approved techniques for opaque, body and incisal porcelain application for Implant Systems.

19.0	Describe the Standard Components and fabrication of semi precision attachments. The student will be able to:
	19.01 Explain the uses of attachments and stress breakers.
	19.02 Define and explain basic attachments groups and impression needed.
	19.03 Define Attachment Selection.
	19.04 Demonstrate proper design and fabrication of a Semi Precision Attachment.
	19.05 Explain the advantages and disadvantages of attachments.
	19.06 Compare Semi Precision Attachments versus Precision Attachments.
20.0	Demonstrate proper design and fabrication of Hybrid Restoration. The student will be able to:
	20.01 Fabricate a Bar and Clip Retained Overdenture.
	20.02 Fabricate Custom Tray and Master Cast.
	20.03 Fabricate Baseplate and Occlusion Rims.
	20.04 Fabricate Articulation and Trial Denture.
	20.05 Fabricate a Bar.
	20.06 Demonstrate proper design and fabrication of a Denture Over Implants with a Bar.
Course Number: DTE0481 **Occupational Completion Point: G** **Master Dental Laboratory Technician – 180 Hours**	
21.0	Specialization Removable Appliances: Demonstrate their skills in removable dentures on specific projects. The student will be able to:
	21.01 Survey and design a maxillary and mandibular removable partial denture.
	21.02 Identify and explain the use of wax in a wide variety of clasps.
	21.03 Duplicate master casts.
	21.04 Sprue and invest waxed partial denture castings.
	21.05 Finish and polish a removable partial denture casting.

22.0	Perform select proficiency in fixed restorative techniques in chosen areas of specialization. The student will be able to:
	22.01 Manufacture fixed restorations more quickly and with increased skill.
	22.02 Demonstrate a thorough understanding of the procedures involved in the fabrication of fixed restorations.

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as, experimental, quality, and safety procedures are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate and troubleshoot equipment/tools used to make observations. Students understand measurement error; and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

Laboratory activities are integrated with the didactic portion of this program. Students perform representative tasks in the manufacture of custom made dental devices and become involved in the dental health team through first hand observation in clinical procedures as they relate to laboratory techniques.

Special Notes

Reinforcement of basic skills in English, mathematics and science appropriate for the job preparatory programs occurs through vocational classroom instruction and applied laboratory procedures or practice.

The program should meet the requirements of the Commission on Dental Accreditation of the American Dental Association. Students should be prepared to take the recognized graduate examination offered by the National Board for Certification in Dental Laboratory technology, Inc.

Dental Laboratory Technicians will complete the certificate program and be prepared to take the recognized graduate examination offered by the National Board of Certificate for Dental Laboratory Technicians.

The standard length of the program is 2040 clock hours.

Career and Technical Student Organization (CTSO)

CTSOs are co-curricular career and technical student organizations providing leadership training and reinforcing specific career and technical skills. Career and Technical Student Organizations provide activities for students as an integral part of the instruction offered. Other CTSOs not listed in this curriculum framework or recognized by the Florida Department of Education are permissible provided they support student mastery over the standards and benchmarks of this curriculum framework.

Cooperative Training – OJT

On-the-job training is appropriate but not required for this program. Whenever offered, the rules, guidelines, and requirements specified in the OJT framework apply.

Basic Skills

In Career Certificate programs offered for 450 hours or more, in accordance with Rule 6A-10.040, F.A.C., the minimum basic skills grade levels required for postsecondary adult career and technical students to complete this program are: Computation (Mathematics) and Communications (Language and Reading and Language Arts). These grade level numbers correspond to a grade equivalent score obtained on a state designated basic skills examination.

Adult students with disabilities, as defined in Section 1004.02, Florida Statutes, may be exempted from meeting the Basic Skills requirements (Rule 6A-10.040). Students served in exceptional student education (except gifted) as defined in s. 1003.01, F.S., may also be exempted from meeting the Basic Skills requirement. Each school district and Florida College System Institution must adopt a policy addressing procedures for exempting eligible students with disabilities from the Basic Skills requirement as permitted in Section 1004.91, F.S.

Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

Note: postsecondary curriculum and regulated secondary programs cannot be modified.

Florida Department of Education
Curriculum Framework

Program Title: **Hemodialysis Technician**
Program Type: **Career Preparatory**
Career Cluster: **Health Science**

Career Certificate Program		
Program Number	H170207	
CIP Number	0351101100	
Grade Level	30, 31	
Program Length	600 hours	
Teacher Certification	Refer to the **Program Structure** section.	
CTSO	HOSA	
SOC Codes (all applicable)	For program SOC codes, please see the Program and Course Tables section of the CTE Program Resources page linked below.	
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml	
Basic Skills Level	Computation (Mathematics): 10	Communications (Reading and Language Arts): 10

Purpose

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Health Science career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of Health Science career cluster.

The content includes but is not limited to communication and interpersonal skills, legal and ethical responsibilities, renal health-illness concepts, hemodialysis skills, emergency procedures including CPR and first aid, safety and security procedures, medical terminology, anatomy and physiology, and employability skills.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Program Structure

This program is a planned sequence of instruction consisting of 2 occupational completion points.

This program is comprised of courses which have been assigned course numbers in the SCNS (Statewide Course Numbering System) in accordance with Section 1007.24 (1), F.S. Career and Technical credit shall be awarded to the student on a transcript in accordance with Section 1001.44(3) (b), F.S.

To teach the courses listed below, instructors must hold at least one of the teacher certifications indicated for that course.

The following table illustrates the postsecondary program structure:

OCP	Course Number	Course Title	Teacher Certification	Length
A	HSC0003	Basic Healthcare Worker	REG NURSE 7 G HEMO TEC 7 G PRAC NURSE @7 %7%G (Must be a Registered Nurse)	90 hours
B	MLT0368	Dialysis Technician 1		255 hours
	MLT0369	Dialysis Technician 2		255 hours

Florida's Career Readiness Skills for CTE Programs

Employability Skills	
01.0	Apply academic skills to workplace scenarios.
01.01	Use reading skills.
01.02	Use writing skills.
01.03	Use mathematical strategies and procedures.
01.04	Use scientific principles and procedures.
02.0	Design a solution to an industry problem.
02.01	Use critical thinking.
02.02	Use creativity.
02.03	Make sound decisions.
02.04	Solve problems.
02.05	Reason.
02.06	Plan and organize.
03.0	Manage resources within an industry project
03.01	Manage time.
03.02	Manage money or resources.
03.03	Manage materials.
03.04	Manage personnel.
04.0	Oversee the subcomponents, operations and output of a technical or organizational system.
04.01	Manage systems.
04.02	Monitor systems.
04.03	Improve systems.
05.0	Use information for decision making.
05.01	Locate information.
05.02	Organize information.
05.03	Use information.

	05.04 Analyze information.
	05.05 Communicate information.
06.0	Apply relevant technology to workplace scenarios to aid productivity.
	06.01 Use technology.
07.0	Interpret and express interpersonal communication.
	07.01 Communicate verbally.
	07.02 Listen actively.
	07.03 Comprehend written material.
	07.04 Convey information in writing.
	07.05 Communicate nonverbally.
	07.06 Interpret nonverbal communication.
08.0	Interact with others to accomplish workplace goals.
	08.01 Collaborate with others in a team.
	08.02 Respond to customer needs.
	08.03 Exercise leadership.
	08.04 Negotiate to resolve conflict.
	08.05 Respect others.
09.0	Manage personal behavior to maximize productivity and professional growth.
	09.01 Demonstrate responsibility and self-discipline.
	09.02 Adapt and show flexibility.
	09.03 Work independently.
	09.04 Demonstrate a willingness to learn.
	09.05 Demonstrate integrity.
	09.06 Demonstrate professionalism.
	09.07 Take initiative.
	09.08 Display positive attitude.
	09.09 Take responsibility for professional growth.

Job Attainment	
10.0	Find, assess and apply to job opportunities.
10.01	Identify online job posts relevant to his or her career aspirations.
10.02	Compare and contrast the job posts' required qualifications, job duties, compensation, benefits and employers.
10.03	Define what information, documentation and writing prompts are required for the positions.
11.0	Communicate personal competence, character and fit for a job opportunity.
11.01	Develop a resume.
11.02	Write a cover letter.
11.03	Curate a professional portfolio that includes work products.
11.04	Prepare for and experience a mock job interview.
12.0	Cultivate and leverage relationships to professionally advance.
12.01	Request a signed reference letter, letter of recommendation and/or an online skill/professionalism endorsement.
12.02	Develop a plan to cultivate a professional digital footprint.
12.03	Develop a networking plan for a specific industry of interest.

Standards

After successfully completing this program, the student will be able to perform the following:

01.0 Demonstrate knowledge of the healthcare delivery system and health occupations.
02.0 Demonstrate the ability to communicate and use interpersonal skills effectively.
03.0 Demonstrate legal and ethical responsibilities.
04.0 Demonstrate an understanding of and apply wellness and disease concepts.
05.0 Recognize and practice safety and security procedures.
06.0 Recognize and respond to emergency situations.
07.0 Recognize and practice infection control procedures.
08.0 Demonstrate an understanding of information technology applications in healthcare.
09.0 Demonstrate employability skills.
10.0 Demonstrate knowledge of blood borne diseases, including HIV/AIDS.
11.0 Apply basic math and science skills.
12.0 Demonstrate accepted professional, communication and interpersonal skills specific to the dialysis setting.
13.0 Identify normal and abnormal anatomic structure and function of body systems in relation to services performed by a Hemodialysis Technician.
14.0 Practice infection control following universal precautions.
15.0 Recognize and demonstrate knowledge of how to utilize equipment and supplies specific to dialysis.
16.0 Demonstrate skills and knowledge necessary to perform dialysis technician duties.
17.0 Practice accepted procedures of transporting specimens.
18.0 Practice quality assurance and safety.
19.0 Demonstrate emergency planning and response.

Florida Department of Education
Student Performance Standards

Program Title: Hemodialysis Technician
Career Certificate Program Number: H17207

The **Basic Health Care Worker (HSC0003)** is referred to as the **Health Science Core** and is the first OCP in the majority of the Career Certificate Program health science programs. Secondary and Postsecondary students completing the health science core will not have to repeat the core in any other health science program in which it is a part. When the recommended sequence is followed, the structure allows students to complete at specified points for employment or remain for advanced training or cross-training.

Course Number: HSC0003
Occupational Completion Point: A
Basic Healthcare Worker – 90 Hours

To ensure consistency whenever these courses are offered, the health science core standards (1-11) and benchmarks have been placed in a separate document. To access this document, visit this link:
https://www.fldoe.org/file/20894/health-sci-core-psav-cc-2627.rtf

Course Number: MLT0368
Occupational Completion Point: B
Dialysis Technician 1 – 255 Hours

12.0	Demonstrate accepted professional, communication, and interpersonal skills specific to the dialysis setting. The student will be able to:
12.01	Demonstrate knowledge of correct medical terminology related to dialysis.
12.02	Demonstrate ability to work as a member of the hemodialysis team.
12.03	Demonstrate knowledge of various professional organizations related to hemodialysis.
12.04	Recognize the importance of continuing education and renewal of certification.
12.05	Recognize and respond appropriately to request from or to other departments or health care team members.
12.06	Describe the role of other health team members who interact with the dialysis team.
13.0	Identify normal and abnormal anatomic structure and function of body systems in relation to services performed by a hemodialysis technician. The student will be able to:
13.01	Demonstrate knowledge of basic structure of the kidney.
13.02	Demonstrate knowledge of basic physiology of the kidney including but not limited to filtration, diffusion, osmosis, and electrolyte interchange.

	13.03 Recognize function of endocrine system as related to the kidney.
	13.04 Describe interaction of other body systems related to dialysis.
	13.05 Discuss diseases, including diagnosis, treatment, and signs and symptoms, which may lead to kidney failure and need for dialysis.
14.0	Practice infection control following standard precautions. The student will be able to:
	14.01 Demonstrate knowledge of how (when) to utilize personal protection equipment (PPE).
	14.02 Demonstrate ability to recognize biohazardous waste storage and disposal, including, but not limited to isolation room waste.
	14.03 Follow standard precautions, clean techniques and OSHA regulations appropriately
	14.04 Label biohazardous waste correctly including date and location.
15.0	Recognize and demonstrate knowledge of how to utilize equipment and supplies specific to dialysis. The student will be able to:
	15.01 Demonstrate use of water quality instrumentation including, but not limited to pH meter, conductivity meter and chloramine meter.
	15.02 Recognize supplies needed to conduct the hemodialysis treatment.
	15.03 Demonstrate ability to conduct daily inventory of hemodialysis supplies including, but not limited to dialysis, blood lines, and sodium chloride.
	15.04 Recognize necessity of keeping areas stocked for each staff.
Course Number: MLT0369 Occupational Completion Point: B Dialysis Technician 2 – 255 Hours	
16.0	Demonstrate skills and knowledge necessary to perform dialysis technician duties. The student will be able to:
	16.01 Demonstrate accurate documentation, machine troubleshooting, and follow-up of whole patient hemodialysis treatment.
	16.02 Recognize any visual changes in patient’s behavior, hemodialysis machines and water room.
	16.03 Demonstrate knowledge of the purpose of water softeners, carbon tank, reverse osmosis, and deionization, follow the monitoring guidelines for water purification equipment, distribution Systems and dialysate.
	16.04 Demonstrate ability to cannulate, assess and confirm blood flow direction in patient's access; including, but not limited to signs of infection and patency.
17.0	Practice accepted procedures of transporting specimens. The student will be able to:
	17.01 Collect blood specimens utilizing correct drawing techniques, refrigeration, packing, and transportation.

	17.02 Follow laboratory's policy and procedures (P and P) from collection of specimens to separation of blood form elements.
18.0	Practice quality assurance and safety. The student will be able to:
	18.01 Demonstrate how to follow-up physician's medical orders, including, but not limited to treatment length, blood flow rates, dialysis type and concentration.
	18.02 Assist with maintenance of appropriate aseptic techniques (clean and/or sterile) during cannulation.
	18.03 Recognize patient's target weight (TW) importance, and maximum ultra-filtration rate possible.
	18.04 Describe patient's probable prognosis when dry weight is not reached.
	18.05 Demonstrate patient safety practices as related to permanent monitor patient - machine.
	18.06 Identify appropriate procedures and protocols to manage and correct common complications, including but not limited to, intradialytic hypotension, air embolisms, exsanguination (mass blood loss) and hemolysis.
19.0	Demonstrate emergency planning and response. The students will be able to:
	19.01 Demonstrate ability to follow the steps of emergency preparedness, including regulations, oversights and threat levels.
	19.02 Demonstrate the ability to perform rapid and safe patient disconnection in the event of an emergency situation.

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as, experimental, quality, and safety procedures are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate and troubleshoot equipment/tools used to make observations. Students understand measurement error; and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

Hands on clinical experience should be provided as part of the program of study. Refer to specific certification exam eligibility requirements in relation to clinical experience.

Special Notes

This program meets the Department of Health's education requirements for HIV/AIDS, Domestic Violence and Prevention of Medical Errors. Although not a requirement for initial licensure, it is a requirement for renewal, therefore the instructor **may** provide a certificate for renewal purposes to the student verifying these requirements have been met.

If students in this program are seeking a licensure, certificate or registration through the Department of Health, please refer to 456.0635, F.S. for more information on disqualification for a license, certificate, or registration through the Department of Health.

State or Industry certification examinations are now part of the Centers of Medicare and Medicaid Services' (CMS) requirements and are available through several state and independent professional certification agencies:

Nephrology Nursing Certification Commission (NNCC) http://www.nncc-exam.org
The Board of Nephrology Examiners Nursing and Technology (BONENT) https://bonent.org/exams-certifications/

The Core should be taken first in the program. Following the successful completion of the core, the student is eligible to take the National Health Care Foundation Skill Standards Assessment with instructor approval and the completion of a portfolio.

Career and Technical Student Organization (CTSO)

CTSOs are co-curricular career and technical student organizations providing leadership training and reinforcing specific career and technical skills. Career and Technical Student Organizations provide activities for students as an integral part of the instruction offered. Other CTSOs not listed in this curriculum framework or recognized by the Florida Department of Education are permissible provided they support student mastery over the standards and benchmarks of this curriculum framework.

Cooperative Training – OJT

On-the-job training is appropriate but not required for this program. Whenever offered, the rules, guidelines, and requirements specified in the OJT framework apply.

Basic Skills

In Career Certificate programs offered for 450 hours or more, in accordance with Rule 6A-10.040, F.A.C., the minimum basic skills grade levels required for postsecondary adult career and technical students to complete this program are: Computation (Mathematics) and Communications (Reading and Language Arts). These grade level numbers correspond to a grade equivalent score obtained on a state designated basic skills examination.

Adult students with disabilities, as defined in Section 1004.02, Florida Statutes, may be exempted from meeting the Basic Skills requirements (Rule 6A-10.040). Students served in exceptional student education (except gifted) as defined in s. 1003.01, F.S., may also be exempted from meeting the Basic Skills requirement. Each school district and Florida College System Institution must adopt a policy addressing procedures for exempting eligible students with disabilities from the Basic Skills requirement as permitted in Section 1004.91, F.S.

Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

Note: postsecondary curriculum and regulated secondary programs cannot be modified.

Florida Department of Education
Curriculum Framework

Program Title: **Electrocardiograph Technology**
Program Type: **Career Preparatory**
Career Cluster: **Health Science**

Career Certificate Program		
Program Number	H170208	
CIP Number	0351090203	
Grade Level	30, 31	
Program Length	465 hours	
Teacher Certification	Refer to the **Program Structure** section.	
CTSO	HOSA	
SOC Codes (all applicable)	For program SOC codes, please see the Program and Course Tables section of the CTE Program Resources page linked below.	
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml	
Basic Skills Level	Computation (Mathematics): 9	Communications (Reading and Language Arts): 9

Purpose

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Health Science career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of Health Science career cluster.

The program is designed to prepare students for employment as electrocardiograph aides, electrocardiograph technicians, EKG Technicians, cardiovascular technologists, and technicians, or to provide supplemental training for persons previously or currently employed in this occupation.

The content includes but is not limited to communication and interpersonal skills, overview of human anatomy and physiology with emphasis on cardiac and vascular systems, medical terminology and transcription, patient care techniques, medical instrumentation, cardiovascular drugs, interpretation of monitoring and testing results, medical ethics, cardiac wellness and rehabilitation, safe and efficient work practices, CPR, Basic Life Support (BLS) and employability skills.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Program Structure

This program is a planned sequence of instruction consisting of 3 occupational completion points.

This program is comprised of courses which have been assigned course numbers in the SCNS (Statewide Course Numbering System) in accordance with Section 1007.24 (1), F.S. Career and Technical credit shall be awarded to the student on a transcript in accordance with Section 1001.44(3) (b), F.S.

To teach the courses listed below, instructors must hold at least one of the teacher certifications indicated for that course.

The following table illustrates the postsecondary program structure:

OCP	Course Number	Course Title	Teacher Certification	Length
A	HSC0003	Basic Healthcare Worker	LAB TECH @7 7G EKG 7 G REG NURSE 7 G RESP THER @7 7G PARAMEDIC @7 7G MED ASST 7G PRAC NURSE @7 %7%G (Must be a Registered Nurse)	90 hours
B	MEA0540	EKG Aide		75 hours
C	MEA0541	EKG Technician		300 hours

Florida's Career Readiness Skills for CTE Programs

Employability Skills	
01.0	Apply academic skills to workplace scenarios.
01.01	Use reading skills.
01.02	Use writing skills.
01.03	Use mathematical strategies and procedures.
01.04	Use scientific principles and procedures.
02.0	Design a solution to an industry problem.
02.01	Use critical thinking.
02.02	Use creativity.
02.03	Make sound decisions.
02.04	Solve problems.
02.05	Reason.
02.06	Plan and organize.
03.0	Manage resources within an industry project
03.01	Manage time.
03.02	Manage money or resources.
03.03	Manage materials.
03.04	Manage personnel.
04.0	Oversee the subcomponents, operations and output of a technical or organizational system.
04.01	Manage systems.
04.02	Monitor systems.
04.03	Improve systems.
05.0	Use information for decision making.
05.01	Locate information.
05.02	Organize information.
05.03	Use information.

	05.04 Analyze information.
	05.05 Communicate information.
06.0	Apply relevant technology to workplace scenarios to aid productivity.
	06.01 Use technology.
07.0	Interpret and express interpersonal communication.
	07.01 Communicate verbally.
	07.02 Listen actively.
	07.03 Comprehend written material.
	07.04 Convey information in writing.
	07.05 Communicate nonverbally.
	07.06 Interpret nonverbal communication.
08.0	Interact with others to accomplish workplace goals.
	08.01 Collaborate with others in a team.
	08.02 Respond to customer needs.
	08.03 Exercise leadership.
	08.04 Negotiate to resolve conflict.
	08.05 Respect others.
09.0	Manage personal behavior to maximize productivity and professional growth.
	09.01 Demonstrate responsibility and self-discipline.
	09.02 Adapt and show flexibility.
	09.03 Work independently.
	09.04 Demonstrate a willingness to learn.
	09.05 Demonstrate integrity.
	09.06 Demonstrate professionalism.
	09.07 Take initiative.
	09.08 Display positive attitude.
	09.09 Take responsibility for professional growth.

Job Attainment	
10.0	Find, assess and apply to job opportunities.
10.01	Identify online job posts relevant to his or her career aspirations.
10.02	Compare and contrast the job posts' required qualifications, job duties, compensation, benefits and employers.
10.03	Define what information, documentation and writing prompts are required for the positions.
11.0	Communicate personal competence, character and fit for a job opportunity.
11.01	Develop a resume.
11.02	Write a cover letter.
11.03	Curate a professional portfolio that includes work products.
11.04	Prepare for and experience a mock job interview.
12.0	Cultivate and leverage relationships to professionally advance.
12.01	Request a signed reference letter, letter of recommendation and/or an online skill/professionalism endorsement.
12.02	Develop a plan to cultivate a professional digital footprint.
12.03	Develop a networking plan for a specific industry of interest.

Standards

After successfully completing this program, the student will be able to perform the following:

01.0 Demonstrate knowledge of the healthcare delivery system and health occupations.
02.0 Demonstrate the ability to communicate and use interpersonal skills effectively.
03.0 Demonstrate legal and ethical responsibilities.
04.0 Demonstrate an understanding of and apply wellness and disease concepts.
05.0 Recognize and practice safety and security procedures.
06.0 Recognize and respond to emergency situations.
07.0 Recognize and practice infection control procedures.
08.0 Demonstrate an understanding of information technology applications in healthcare.
09.0 Demonstrate employability skills.
10.0 Demonstrate knowledge of blood-borne diseases, including HIV/AIDS.
11.0 Apply basic math and science skills.
12.0 Describe the cardiovascular system.
13.0 Identify legal and ethical responsibilities of an EKG aide.
14.0 Demonstrate knowledge of, apply, and use medical instrumentation modalities.
15.0 Perform patient care techniques in the health care facility.
16.0 Recognize normal and abnormal monitoring and testing results.
17.0 Describe cardiovascular drugs, their actions, use, and adverse effects.
18.0 Demonstrate knowledge of other cardiovascular diagnostic modalities.

Florida Department of Education
Student Performance Standards

Program Title: Electrocardiograph Technology
Career Certificate Program Number: H170208

The **Basic Health Care Worker (HSC0003)** is referred to as the **Health Science Core** and is the first OCP in the majority of the Career Certificate Program health science programs. Secondary and Postsecondary students completing the health science core will not have to repeat the core in any other health science program in which it is a part. When the recommended sequence is followed, the structure allows students to complete at specified points for employment or remain for advanced training or cross-training.

Career Certificate Program Course Number: HSC0003
Occupational Completion Point: A
Basic Healthcare Worker – 90 Hours

To ensure consistency whenever these courses are offered, the health science core standards (1-11) and benchmarks have been placed in a separate document. To access this document, visit this link:
https://www.fldoe.org/file/20894/health-sci-core-psav-cc-2627.rtf

Course Number: MEA0540
Occupational Completion Point: B
EKG Aide – 75 Hours

12.0	Describe the cardiovascular system. The student will be able to:
12.01	Locate the heart and surrounding structures.
12.02	Review the structure and function of the heart.
12.03	Trace the flow of blood through the cardiopulmonary system.
12.04	Identify and describe the electrical conduction system.
12.05	Describe signs and symptoms of a patient demonstrating poor perfusion or low cardiac output and state the importance of rapid reporting.
13.0	Identify legal and ethical responsibilities of an EKG aide. The student will be able to:
13.01	Recognize and practice legal and ethical responsibilities as they relate to an EKG aide.
13.02	Maintain a safe and efficient work environment.
13.03	Maintain EKG equipment per the manufacturer’s guidelines so it will be safe and accurate.
14.0	Demonstrate knowledge of, apply, and use medical instrumentation modalities. The student will be able to:

14.01	Calibrate and maintain EKG equipment in the work environment and verify settings on the EKG machine.
14.02	Identify three types of lead systems (standard/limb, augmented, and precordial/chest).
14.03	Apply the concepts and history of Einthoven's triangle and Wilson's Central Terminal to EKG tracing.
14.04	Prepare the patient and demonstrate proper lead placement, including lead placement with special consideration for various patients with special needs.
14.05	Demonstrate knowledge of the application of a Holter Monitor, ambulatory monitoring, and provide patient education on its use.
14.06	Identify artifacts and mechanical problems.
14.07	Perform a 3, 5, and 12 lead EKG and perform a rhythm strip.
14.08	Recognize normal sinus rhythm.
14.09	Report any dysrhythmias that are not normal sinus rhythm.
14.10	Recognize signs and symptoms of cardiac emergencies on the EKG tracing and understand the importance of rapid reporting.
14.11	Use documentation skills to identify an electrocardiograph.
15.0	Perform patient care techniques in the health care facility. The student will be able to:
15.01	Describe the physical and mental preparation of the patient for EKG testing.
15.02	Identify the patient and verify the requisition order.
15.03	State precautions required when performing cardiovascular diagnostic procedures.
Course Number: MEA0541 Occupational Completion Point: C EKG Technician – 300 Hours	
16.0	Recognize normal and abnormal monitoring and testing results. The student will be able to:
16.01	Inspect and measure the various waveforms of a cardiac cycle, including segments, complexes, heart rates, and intervals.
16.02	Identify the electrical axis of the heart.
16.03	Recognize pacemaker spikes on the EKG and state the purpose of pacemakers.
16.04	Recognize normal and deviations from single chamber and dual chamber pacemakers, as well as all implantable cardioverter defibrillators.

	16.05 Identify myocardial ischemia, injury, and infarction on EKG tracing.
	16.06 Recognize atrial and ventricular hypertrophies.
	16.07 Recognize ectopic beats and any rare phenomena.
	16.08 Describe potential patient responses to all dysrhythmias and other EKG abnormalities.
	16.09 Recognize and respond promptly to life-threatening dysrhythmias during continuous monitoring such as telemetry.
17.0	Describe cardiovascular drugs, their actions, use, and adverse effects. The student will be able to:
	17.01 Describe the mechanisms by which common cardiovascular drugs work, including actions and adverse effects.
	17.02 Differentiate between normal and abnormal EKG changes potentially due to drugs.
18.0	Demonstrate knowledge of other cardiovascular diagnostic modalities. The student will be able to:
	18.01 Understand and demonstrate patient documentation for all types of monitoring.
	18.02 Describe other modalities of cardiovascular diagnosis and interpretation.
	18.03 Understand patient cardiac alarm policy per acceptable facility guidelines.

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as experimental, quality, and safety procedures, are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate and troubleshoot equipment/tools used to make observations. Students understand measurement error; and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

Special Notes

This cluster of programs focuses on broad, transferable skills and stresses understanding and demonstration of the following elements of the health care industry; planning, management, finance, technical and production skills, underlying principles of technology, labor issues, community issues and health, safety, and environmental issues.

Students must complete the core, or demonstrate the mastery of skills standards contained in the core, before advancing in the program. The Core should be taken first in the program. Following the successful completion of the core, the student is eligible to take the National Health Care Foundation Skill Standards Assessment with instructor approval and the completion of a portfolio.

This program meets the Department of Health's education requirements for HIV/AIDS, Domestic Violence and Prevention of Medical Errors. Although not a requirement for initial licensure, it is a requirement for renewal, therefore the instructor **may** provide a certificate for renewal purposes to the student verifying these requirements have been met.

If students in this program are seeking a licensure, certificate or registration through the Department of Health, please refer to 456.0635, F.S. for more information on disqualification for a license, certificate, or registration through the Department of Health.

A voluntary national certification is available through an exam offered by the National Health Career Association, 194 Rt. 46 East, Fairfield, NJ 07004 (973-244-0023). To be eligible students must:

1. Have a High School Diploma or equivalency and have completed an NHA approved training program.
   OR
2. Have a High School Diploma or equivalency and have worked in the field for a minimum of one year.

Career and Technical Student Organization (CTSO)

CTSOs are co-curricular career and technical student organizations providing leadership training and reinforcing specific career and technical skills. Career and Technical Student Organizations provide activities for students as an integral part of the instruction offered. Other CTSOs not listed in this curriculum framework or recognized by the Florida Department of Education are permissible provided they support student mastery over the standards and benchmarks of this curriculum framework.

Cooperative Training – OJT

On-the-job training is appropriate but not required for this program. Whenever offered, the rules, guidelines, and requirements specified in the OJT framework apply.

Basic Skills

In Career Certificate programs offered for 450 hours or more, in accordance with Rule 6A-10.040, F.A.C., the minimum basic skills grade levels required for postsecondary adult career and technical students to complete this program are: Computation (Mathematics) and Communications (Reading and Language Arts). These grade level numbers correspond to a grade equivalent score obtained on a state designated basic skills examination.

Adult students with disabilities, as defined in Section 1004.02, Florida Statutes, may be exempted from meeting the Basic Skills requirements (Rule 6A-10.040). Students served in exceptional student education (except gifted) as defined in s. 1003.01, F.S., may also be exempted from meeting the Basic Skills requirement. Each school district and Florida College System Institution must adopt a policy addressing procedures for exempting eligible students with disabilities from the Basic Skills requirement as permitted in Section 1004.91, F.S.

Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

Note: postsecondary curriculum and regulated secondary programs cannot be modified.

Florida Department of Education
Curriculum Framework

No new students may be enrolled in this program starting 2026-27. The last year to report any enrollment is 2028-29. This program was replaced by Surgical Technology H700200 (0351090909).

Program Title: **Surgical Technology**
Program Type: **Career Preparatory**
Career Cluster: **Health Science**

Career Certificate Program		
Program Number	H170211	
CIP Number	0351090905	
Grade Level	30, 31	
Program Length	1330 hours	
Teacher Certification	Refer to the **Program Structure** section.	
CTSO	HOSA	
SOC Codes (all applicable)	For program SOC codes, please see the Program and Course Tables section of the CTE Program Resources page linked below.	
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml	
Basic Skills Level	Computation (Mathematics): 10	Communications (Reading and Language Arts): 11

Purpose

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Health Science career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of Health Science career cluster.

The program is designed to prepare students for employment as surgical technologists. Selected portions of this program may be utilized to provide additional skills to enable nursing graduates to become employable in operating rooms as surgical technologists.

The content includes but is not limited to communication and interpersonal skills, legal and ethical responsibilities, anatomy, physiology, pathophysiology, microbiology, aseptic techniques, patient care procedures, surgical technology procedures, patient safety, use and care of equipment and supplies, CPR, Heartsaver, employability skills, and basic computer literacy.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Program Structure

This program is a planned sequence of instruction consisting of 3 occupational completion points.

This program is comprised of courses which have been assigned course numbers in the SCNS (Statewide Course Numbering System) in accordance with Section 1007.24 (1), F.S. Career and Technical credit shall be awarded to the student on a transcript in accordance with Section 1001.44(3)(b), F.S.

To teach the courses listed below, instructors must hold at least one of the teacher certifications indicated for that course.

The following table illustrates the postsecondary program structure:

OCP	Course Number	Course Title	Teacher Certification	Length
A	HSC0003	Basic Healthcare Worker	OPR RM TEC @7 7G REG NURSE 7 G OPR REG NURSE 7 G SURG TECH 7 G PRAC NURSE @7 %7%G (Must be a Registered Nurse)	90 hours
B	STS0015	Central Supply Technician		210 hours
C	STS0010	Surgical Technologist 1		343 hours
	STS0011	Surgical Technologist 2		343 hours
	STS0012	Surgical Technologist 3		344 hours

Florida's Career Readiness Skills for CTE Programs

Employability Skills	
01.0	Apply academic skills to workplace scenarios.
01.01	Use reading skills.
01.02	Use writing skills.
01.03	Use mathematical strategies and procedures.
01.04	Use scientific principles and procedures.
02.0	Design a solution to an industry problem.
02.01	Use critical thinking.
02.02	Use creativity.
02.03	Make sound decisions.
02.04	Solve problems.
02.05	Reason.
02.06	Plan and organize.
03.0	Manage resources within an industry project
03.01	Manage time.
03.02	Manage money or resources.
03.03	Manage materials.
03.04	Manage personnel.
04.0	Oversee the subcomponents, operations and output of a technical or organizational system.
04.01	Manage systems.
04.02	Monitor systems.
04.03	Improve systems.
05.0	Use information for decision making.
05.01	Locate information.
05.02	Organize information.
05.03	Use information.

	05.04 Analyze information.
	05.05 Communicate information.
06.0	Apply relevant technology to workplace scenarios to aid productivity.
	06.01 Use technology.
07.0	Interpret and express interpersonal communication.
	07.01 Communicate verbally.
	07.02 Listen actively.
	07.03 Comprehend written material.
	07.04 Convey information in writing.
	07.05 Communicate nonverbally.
	07.06 Interpret nonverbal communication.
08.0	Interact with others to accomplish workplace goals.
	08.01 Collaborate with others in a team.
	08.02 Respond to customer needs.
	08.03 Exercise leadership.
	08.04 Negotiate to resolve conflict.
	08.05 Respect others.
09.0	Manage personal behavior to maximize productivity and professional growth.
	09.01 Demonstrate responsibility and self-discipline.
	09.02 Adapt and show flexibility.
	09.03 Work independently.
	09.04 Demonstrate a willingness to learn.
	09.05 Demonstrate integrity.
	09.06 Demonstrate professionalism.
	09.07 Take initiative.
	09.08 Display positive attitude.
	09.09 Take responsibility for professional growth.

Job Attainment	
10.0	Find, assess and apply to job opportunities.
10.01	Identify online job posts relevant to his or her career aspirations.
10.02	Compare and contrast the job posts' required qualifications, job duties, compensation, benefits and employers.
10.03	Define what information, documentation and writing prompts are required for the positions.
11.0	Communicate personal competence, character and fit for a job opportunity.
11.01	Develop a resume.
11.02	Write a cover letter.
11.03	Curate a professional portfolio that includes work products.
11.04	Prepare for and experience a mock job interview.
12.0	Cultivate and leverage relationships to professionally advance.
12.01	Request a signed reference letter, letter of recommendation and/or an online skill/professionalism endorsement.
12.02	Develop a plan to cultivate a professional digital footprint.
12.03	Develop a networking plan for a specific industry of interest.

Standards

After successfully completing this program, the student will be able to perform the following:

01.0 Demonstrate knowledge of the healthcare delivery system and health occupations.
02.0 Demonstrate the ability to communicate and use interpersonal skills effectively.
03.0 Demonstrate legal and ethical responsibilities.
04.0 Demonstrate an understanding of and apply wellness and disease concepts.
05.0 Recognize and practice safety and security procedures.
06.0 Recognize and respond to emergency situations.
07.0 Recognize and practice infection control procedures.
08.0 Demonstrate an understanding of information technology applications in healthcare.
09.0 Demonstrate employability skills.
10.0 Demonstrate knowledge of blood borne diseases, including HIV/AIDS.
11.0 Apply basic math and science skills.
12.0 Demonstrate central supply skills.
13.0 Use communication and interpersonal skills as related to surgical technology.
14.0 Demonstrate an understanding of the basic sciences related to surgical technology.
15.0 Demonstrate knowledge of pharmacology and math calculation principles related to the surgical environment.
16.0 Describe and practice safety measures in the surgical environment.
17.0 Assist the RN circulator with patient care procedures related to the surgical environment and describe methods for meeting patient's needs.
18.0 Demonstrate knowledge of the skills necessary to function safely and effectively.
19.0 Demonstrate knowledge of and assist with surgical procedures.
20.0 Demonstrate an understanding of legal and ethical responsibilities specific to surgical technology.

Florida Department of Education
Student Performance Standards

Program Title: **Surgical Technology**
Career Certificate Program Number: **H170211**

The **Basic Health Care Worker (HSC0003)** is referred to as the **Health Science Core** and is the first OCP in the majority of the Career Certificate Program health science programs. Secondary and Postsecondary students completing the health science core will not have to repeat the core in any other health science program in which it is a part. When the recommended sequence is followed, the structure allows students to complete at specified points for employment or remain for advanced training or cross-training.

Course Number: HSC0003
Occupational Completion Point: A
Basic Healthcare Worker – 90 Hours

To ensure consistency whenever these courses are offered, the health science core standards (1-11) and benchmarks have been placed in a separate document. To access this document, visit this link:
https://www.fldoe.org/file/20894/health-sci-core-psav-cc-2627.rtf

Course Number: STS0015
Occupational Completion Point: B
Central Supply Technician – 210 Hours

12.0	Demonstrate central supply skills. The student will be able to:
12.01	Apply the principles of medical/surgical asepsis including attire, environmental control and traffic patterns to control and manage dirty, clean and sterile areas of the operating room and central supply.
12.02	Apply infection control techniques following Center for Disease Control (CDC) guidelines.
12.03	Inspect and send out for repair instruments, equipment and supplies regarding condition and quantity.
12.04	Describe the methods of disinfection and sterilization.
12.05	Demonstrate the handling, inspection and notification process regarding package integrity.
12.06	Demonstrate correctly decontamination techniques for instruments, equipment, and the environment used for surgical procedures.
12.07	Describe clean and sterile transportation, restocking, and storage principles for instruments, supplies and equipment.
12.08	Identify instruments, supplies and equipment for any surgical procedure.
12.09	Describe various supply distribution and inventory control methods.

	12.10 Demonstrate ability to prepare and label items for high level disinfection and sterilization correctly.
	12.11 Demonstrate the techniques of high level disinfection and sterilization for immediate use items.
	12.12 Demonstrate case cart preparation and management.

Course Number: STS0010 Occupational Completion Point: C Surgical Technologist 1 – 343 Hours	
13.0	Use communication and interpersonal skills as related to surgical technology. The student will be able to:
	13.01 Describe various forms of communication in the role of surgical technologist.
	13.02 Analyze and select the appropriate behavioral response unique to the patient's needs.
	13.03 Describe the concepts of conflict resolution, assertive behavior and the principles of teamwork in the surgical environment.
14.0	Demonstrate an understanding of the basic sciences related to surgical technology. The student will be able to:
	14.01 Describe the concepts of microbiology and relate key principles to the surgical environment.
	14.02 Compare and contrast the structure and characteristics of microorganisms found in the surgical environment.
	14.03 Relate medical terminology, medical abbreviations, and anatomy and physiology to surgical specialties and specific procedures.
	14.04 Analyze patient defense mechanisms, the chain of infection and the infectious process as related to surgical practice.
	14.05 Demonstrate infection and disease transmission control techniques following the Center for Disease Control (CDC) and Occupational Safety and Health Administration (OSHA) guidelines for surgery.
	14.06 Correlate wound classifications and wound healing principles with wound management guidelines.
	14.07 Discuss the principles of information technology, electricity and robotics as they relate to surgery.
15.0	Demonstrate knowledge of pharmacology and math calculation principles related to the surgical environment. The student will be able to:
	15.01 Describe the roles of the anesthesia provider and circulating nurse.
	15.02 Analyze the administration of anesthesia including the methods, agents, and techniques.
	15.03 Describe the preoperative examination and preparation process for both surgery and anesthesia.
	15.04 Describe potential anesthesia and operative complications and interventions for each.

15.05	Define the terminology and describe the basic concepts of pharmacology including pharmacokinetics and pharmacodynamics.
15.06	Identify the classifications, actions, effects and precautions for common drugs used at the sterile field and within the surgical environment.
15.07	Demonstrate the application of the six rights of medication administration.
15.08	Analyze and assemble correctly all medication supplies, for each drug to be used on the sterile field.
15.09	Demonstrate the appropriate methods of transferring and accepting medications onto the sterile field.
15.10	Prepare, manage and label sterile solutions and medications accurately within the sterile field.
15.11	Correctly calculate common medication conversions and dosages.
15.12	Demonstrate preparation and passing of medication mixtures using ratio and proportions correctly. .
15.13	Maintains an accurate account of the amount of each medication and/or solution used at the field and notifies circulator as appropriate to the situation to ensure accurate documentation.
16.0	Describe and practice safety measures in the surgical environment. The student will be able to:
16.01	Describe the role, job duties and responsibilities of the surgical technologist in the healthcare setting.
16.02	Inspect emergency equipment and supplies for condition and quantity.
16.03	Demonstrate appropriate safety measures to prevent operating room fires and electrical shock from equipment.
16.04	Describe appropriate safety measures for laser and electrosurgical unit usage in surgery.
16.05	Implement appropriate regulatory and accreditation agency patient safety guidelines.
16.06	Describe the role of the surgical technologist in a disaster situation.
16.07	Describe the role of the surgical technologist in an emergency patient situation.
16.08	Prepare the operative site.
16.09	Perform steps for Foley catheter insertion and connecting to drainage correctly.

Course Number: STS0011 Occupational Completion Point: C Surgical Technologist 2 – 343 Hours	
17.0	Assist the RN circulator with patient care procedures related to the surgical environment and describe methods for meeting patient's needs. The student will be able to:
17.01	Perform patient transfer/transportation techniques used in the operating room.
17.02	Assist with positioning and apply safety devises to the patient for surgery.
17.03	Ground patient and connect electrosurgical cautery unit.
17.04	Describe the roles of anesthetist and circulating nurse during induction.
17.05	Prepare the operative site.
17.06	Perform steps for Foley catheter insertion and connecting to drainage.
17.07	Apply sterile dressing and bandage.
18.0	Demonstrate knowledge of the skills necessary to function safely and effectively. The student will be able to:
18.01	Select and verify instruments, equipment and supplies, including any implants needed for surgical procedures using surgeon preference/procedure cards including those identified as “have available/hold items”.
18.02	Measure and pour sterile solutions.
18.03	Perform surgical scrub.
18.04	Put on sterile gown and gloves.
18.05	Drape tables and solution stands.
18.06	Set up sterile mayo stand and instrument table.
18.07	Prepare sutures, ligatures, and ties.
18.08	Prepare, pass, and monitor amount given for medications used on the sterile field.
18.09	Assist surgeon in gowning and gloving.
18.10	Assist in draping patient, pass instruments, monitor field.
18.11	Identify/correct and/or report breaks in aseptic technique.
18.12	Monitor body fluids, e.g., blood loss, ascites.

18.13	Perform complete counts with R.N.
18.14	Identify principles and demonstrate techniques of disinfection and sterilization.
18.15	Assist in removing/applying cast.
18.16	Assist in maintaining retraction, cutting suture and holding instruments as directed by the surgeon in the second assistant role.
18.17	Prepare specimen for laboratory analysis.
18.18	Decontaminate instruments equipment and environment.
18.19	Replenish supplies and equipment.
18.20	Describe how to update procedure/preference cards.
18.21	Apply electrical knowledge to safe patient care practices in surgery.

Course Number: STS0012 Occupational Completion Point: C Surgical Technologist 3 – 344 Hours	
19.0	Demonstrate knowledge of and assist with surgical procedures. The student will be able to:
19.01	Identify preoperative diagnosis, common complications, and operative pathology relating to specific surgical procedures.
19.02	List and describe types of incisions and wound closures.
19.03	Describe the usual sequence of a common surgical procedure (i.e., incision into the anatomy, dissection of the anatomy and closing of the anatomy).
19.04	Demonstrates the ability to select the appropriate instrument, equipment, or supply for each step of the procedure.
19.05	Demonstrates proper cost-effective methods including the ability to identify “have available/hold items”.
20.0	Demonstrate an understanding of legal and ethical responsibilities specific to surgical technology. The student will be able to:
20.01	State methods, standards, and aids that assist a surgical technologist with interpreting and following legal responsibilities.
20.02	Describe the role of the surgical technologist in the healthcare setting. Provide health care within the ethical/legal framework of the surgical technologist’s role.

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as, experimental, quality, and safety procedures are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate and troubleshoot equipment/tools used to make observations. Students understand measurement error; and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

Clinical learning experiences in an operating room and related areas are an integral part of this program. It is strongly recommended that a teacher to student ratio of 1:6 be held in the laboratory setting.

Special Notes

This program focuses on broad, transferable skills and stresses understanding and demonstration of the following elements of the health care industry; planning, management, finance, technical and production skills, underlying principles of technology, labor issues, community issues and health, safety, and environmental issues.

This program meets the Department of Health's education requirements for HIV/AIDS, Domestic Violence and Prevention of Medical Errors. Although not a requirement for initial licensure, it is a requirement for renewal, therefore the instructor **may** provide a certificate for renewal purposes to the student verifying these requirements have been met.

If students in this program are seeking a licensure, certificate or registration through the Department of Health, please refer to 456.0635, F.S. for more information on disqualification for a license, certificate, or registration through the Department of Health.

The program should meet the requirements of the Commission on Accreditation of Allied Health Education Programs (CAAHEP) or Accrediting Bureau of Health Education Schools (ABHES).

After successful completion of a Commission on Accreditation of Allied Health Education Programs (CAAHEP) or Accrediting Bureau of Health Education Schools (ABHES) accredited program, students are eligible to take the National Board of Surgical Technologist and Surgical Assisting (NBSTSA), Certified Surgical Technologist exam.

Please contact NBSTSA for more information on this exam: National Board of Surgical Technologist and Surgical Assisting (NBSTSA) http://nbstsa.org/, 6 West Dry Creek Circle, Suite 100 Littleton, Colorado 80120**,** Toll-free: (800) 707-0057

The Core should be taken first in the program. Following the successful completion of the core, the student is eligible to take the National Health Care Foundation Skill Standards Assessment with instructor approval and the completion of a portfolio.

Career and Technical Student Organization (CTSO)

CTSOs are co-curricular career and technical student organizations providing leadership training and reinforcing specific career and technical skills. Career and Technical Student Organizations provide activities for students as an integral part of the instruction offered. Other CTSOs not listed in this curriculum framework or recognized by the Florida Department of Education are permissible provided they support student mastery over the standards and benchmarks of this curriculum framework.

Cooperative Training – OJT

On-the-job training is appropriate but not required for this program. Whenever offered, the rules, guidelines, and requirements specified in the OJT framework apply.

Basic Skills

In Career Certificate programs offered for 450 hours or more, in accordance with Rule 6A-10.040, F.A.C., the minimum basic skills grade levels required for postsecondary adult career and technical students to complete this program are: Computation (Mathematics) and Communications (Reading and Language Arts). These grade level numbers correspond to a grade equivalent score obtained on a state designated basic skills examination.

Adult students with disabilities, as defined in Section 1004.02, Florida Statutes, may be exempted from meeting the Basic Skills requirements (Rule 6A-10.040). Students served in exceptional student education (except gifted) as defined in s. 1003.01, F.S., may also be exempted from meeting the Basic Skills requirement. Each school district and Florida College System Institution must adopt a policy addressing procedures for exempting eligible students with disabilities from the Basic Skills requirement as permitted in Section 1004.91, F.S.

Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

Note: postsecondary curriculum and regulated secondary programs cannot be modified.

Florida Department of Education
Curriculum Framework

Program Title: **Central Sterile Processing Technology**
Program Type: **Career Preparatory**
Career Cluster: **Health Science**

Career Certificate Program		
Program Number	H170222	
CIP Number	0351101201	
Grade Level	30,31	
Program Length	650 hours	
Teacher Certification	Refer to the **Program Structure** section.	
CTSO	HOSA	
SOC Codes (all applicable)	For program SOC codes, please see the Program and Course Tables section of the CTE Program Resources page linked below.	
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml	
Basic Skills Level	Computation (Mathematics): 9	Communications (Reading and Language Arts): 9

Purpose

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Health Science career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of Health Science career cluster.

This program is designed to prepare students for employment as supervisors, central supply, central supply workers, ambulatory surgery processors, surgical instrument processors, gastrointestinal (GI) flexible endoscope reprocessors, case cart technicians, inventory technicians, processing technicians, stock clerks: stock room or warehouse, sterilizers, central service technicians (medical equipment preparers).

The content includes but is not limited to central services departmental organization and function; basic anatomy, physiology, microbiology and chemistry related to central service activities; quality assurance; infection control and isolation techniques, principles of safety; principles, methods and controls of sterilization processes; cleaning, processing, packaging, distributing, storing, and inventory control of sterile goods, instruments, trays, and equipment; medical terminology; surgical instrumentation; basic computer skills, interpersonal and job seeking skills, fundamentals of

communication, case cart management, laparoscopic specialty, orthopedic specialty, flexible scope processing, shift supervisory skills and procurement of supplies and equipment.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Program Structure

This program is a planned sequence of instruction consisting of 2 occupational completion points.

This program is comprised of courses which have been assigned course numbers in the SCNS (Statewide Course Numbering System) in accordance with Section 1007.24 (1), F.S. Career and Technical credit shall be awarded to the student on a transcript in accordance with Section 1001.44(3)(b), F.S.

To teach the courses listed below, instructors must hold at least one of the teacher certifications indicated for that course.

The following table illustrates the postsecondary program structure:

OCP	Course Number	Course Title	Teacher Certification	Length
A	HSC0003	Basic Healthcare Worker	CENT SERV TECH 7 G OPR REG NURSE 7 G SURG TECH 7 G	90 hours
B	STS0019	Central Sterile Service Materials Management		150 hours
C	STS0013	Central Sterile Processing Technician Practicum		410 hours

Florida's Career Readiness Skills for CTE Programs

Employability Skills	
01.0	Apply academic skills to workplace scenarios.
01.01	Use reading skills.
01.02	Use writing skills.
01.03	Use mathematical strategies and procedures.
01.04	Use scientific principles and procedures.
02.0	Design a solution to an industry problem.
02.01	Use critical thinking.
02.02	Use creativity.
02.03	Make sound decisions.
02.04	Solve problems.
02.05	Reason.
02.06	Plan and organize.
03.0	Manage resources within an industry project
03.01	Manage time.
03.02	Manage money or resources.
03.03	Manage materials.
03.04	Manage personnel.
04.0	Oversee the subcomponents, operations and output of a technical or organizational system.
04.01	Manage systems.
04.02	Monitor systems.
04.03	Improve systems.
05.0	Use information for decision making.
05.01	Locate information.
05.02	Organize information.
05.03	Use information.

	05.04 Analyze information.
	05.05 Communicate information.
06.0	Apply relevant technology to workplace scenarios to aid productivity.
	06.01 Use technology.
07.0	Interpret and express interpersonal communication.
	07.01 Communicate verbally.
	07.02 Listen actively.
	07.03 Comprehend written material.
	07.04 Convey information in writing.
	07.05 Communicate nonverbally.
	07.06 Interpret nonverbal communication.
08.0	Interact with others to accomplish workplace goals.
	08.01 Collaborate with others in a team.
	08.02 Respond to customer needs.
	08.03 Exercise leadership.
	08.04 Negotiate to resolve conflict.
	08.05 Respect others.
09.0	Manage personal behavior to maximize productivity and professional growth.
	09.01 Demonstrate responsibility and self-discipline.
	09.02 Adapt and show flexibility.
	09.03 Work independently.
	09.04 Demonstrate a willingness to learn.
	09.05 Demonstrate integrity.
	09.06 Demonstrate professionalism.
	09.07 Take initiative.
	09.08 Display positive attitude.
	09.09 Take responsibility for professional growth.

Job Attainment	
10.0	Find, assess and apply to job opportunities.
10.01	Identify online job posts relevant to his or her career aspirations.
10.02	Compare and contrast the job posts' required qualifications, job duties, compensation, benefits and employers.
10.03	Define what information, documentation and writing prompts are required for the positions.
11.0	Communicate personal competence, character and fit for a job opportunity.
11.01	Develop a resume.
11.02	Write a cover letter.
11.03	Curate a professional portfolio that includes work products.
11.04	Prepare for and experience a mock job interview.
12.0	Cultivate and leverage relationships to professionally advance.
12.01	Request a signed reference letter, letter of recommendation and/or an online skill/professionalism endorsement.
12.02	Develop a plan to cultivate a professional digital footprint.
12.03	Develop a networking plan for a specific industry of interest.

Standards

After successfully completing this program, the student will be able to perform the following:

01.0 Demonstrate knowledge of the healthcare delivery system and health occupations.
02.0 Demonstrate the ability to communicate and use interpersonal skills effectively.
03.0 Demonstrate legal and ethical responsibilities.
04.0 Demonstrate an understanding of and apply wellness and disease concepts.
05.0 Recognize and practice safety and security procedures.
06.0 Recognize and respond to emergency situations.
07.0 Recognize and practice infection control procedures.
08.0 Demonstrate an understanding of information technology applications in healthcare.
09.0 Demonstrate employability skills.
10.0 Demonstrate knowledge of blood borne diseases, including HIV/AIDS.
11.0 Apply basic math and science skills.
12.0 Describe supply distribution systems and the principles of inventory control.
13.0 Describe the processes for loaner instrumentation and equipment.
14.0 Demonstrate the methods of case cart preparation and the utilization of preference cards.
15.0 Demonstrate the ability to recall and dispose of or reprocess sterile supplies.
16.0 Demonstrate language arts knowledge and skills.
17.0 Solve problems using critical thinking skills, creativity, and innovation.
18.0 Describe the roles within teams, work units, departments, organizations, inter-organizational systems, and the larger environment.
19.0 Demonstrate the roles and responsibilities of the central supply worker.
20.0 Describes the function and workflow of the sterile processing department.
21.0 Recognize basic principles of microbiology.
22.0 Interpret and apply medical terminology and anatomical terms as they relate to equipment and supplies issued by central service personnel.
23.0 Describe how central service is involved in controlling infections in hospitals.
24.0 Explain the purpose of Occupational Safety and Health Act (OSHA).
25.0 Translate how to receive, decontaminate, clean, prepare, disinfect and sterilize reusable items.
26.0 Demonstrate flexible endoscopic leak testing, decontamination, and reprocessing.
27.0 Demonstrate the use of sterilization process monitors, including temperature and frequency of appropriate chemical indicators and bacterial spore tests for all sterilizers.
28.0 Demonstrate the ability to identify and select appropriate instrumentation or equipment that meets the needs of the surgical specialty.
29.0 Define the use of Robotics in Central Sterile Processing Technology.

Florida Department of Education
Student Performance Standards

Program Title: **Central Sterile Processing Technology**
Career Certificate Program Number: **H170222**

The **Basic Health Care Worker (HSC0003)** is referred to as the **Health Science Core** and is the first OCP in the majority of the Career Certificate Program health science programs. Secondary and Postsecondary students completing the health science core will not have to repeat the core in any other health science program in which it is a part. When the recommended sequence is followed, the structure allows students to complete at specified points for employment or remain for advanced training or cross-training.

Career Certificate Program Course Number: HSC0003
Occupational Completion Point: A
Basic Healthcare Worker – 90 Hours

To ensure consistency whenever these courses are offered, the health science core standards (1-11) and benchmarks have been placed in a separate document. To access this document, visit this link:
https://www.fldoe.org/file/20894/health-sci-core-psav-cc-2627.rtf

Course Number: STS0019
Occupational Completion Point: B
Central Sterile Service Materials Management – 150 Hours

12.0	Describe supply distribution systems and the principles of inventory control. The student will be able to:
12.01	Define the benefits of inventory control.
12.02	Describe the methods of inventory control.
12.03	Compare the advantages and disadvantages of each distribution methods.
12.04	Process a requisition marked "stat" - locate article, price, etc.
12.05	Demonstrate the process of stock rotation.
12.06	Describe the process of supply chain management.
12.07	Communicate with other hospitals, facilities, or company representatives for procurement of supplies and equipment.
12.08	Describe several different methods of procurement of supplies.
12.09	Describe basics of receiving items, including documentation of receiving and release to other facilities.

13.0	Describe the processes for loaner instrumentation and equipment. The student will be able to:
13.01	Describe how vendor trays enter the hospital.
13.02	Demonstrate how the new vendor trays begin to be processed.
13.03	Demonstrate how the vendor trays are processed for sterilization.
13.04	Define the Rules and Regulations of transporting vendor trays in and out of the hospital Centra Sterile Processing Department.
14.0	Demonstrate the methods of case cart preparation and the utilization of preference cards. The student will be able to:
14.01	Describe the proper standards for case cart preparation
14.02	Describe the method of preparing the cart for use.
14.03	Demonstrate the use of the preference cards and pick list for utilization of case carts
14.04	Describe the procedures for missing items during initial picking of case carts and how missing items are replenished from CS. Ie turnover items or replacement.
15.0	Demonstrate the ability to recall and dispose of or reprocess sterile supplies. The student will be able to:
15.01	Explain the factors that affect how long a package can be considered safe for use.
15.02	Explain the differences between event related, date related, and manufacturer recommendations.
15.03	State the methods of determining expiration dates.
15.04	List the steps in reprocessing outdated hospital packaged items.
15.05	List conditions that would make a product unsafe for use.
15.06	Describe the use of tamper evident seals.
15.07	Describe the methods of reprocessing.
15.08	Identify standards and facility policies on reprocessing of single use items.
15.09	Describe the process of recall for medical/surgical supplies.

Course Number: STS0013 **Occupational Completion Point: C** **Central Sterile Processing Technician Practicum – 410 Hours**	
16.0	Demonstrate language arts knowledge and skills. The students will be able to:
16.01	Locate, comprehend and evaluate key elements of oral and written information.
16.02	Draft, revise, and edit written documents using correct grammar, punctuation and vocabulary.
16.03	Present information formally and informally for specific purposes and audiences.
17.0	Solve problems using critical thinking skills, creativity, and innovation. The students will be able to:
17.01	Employ critical thinking skills independently and in teams to solve problems and make decisions.
17.02	Employ critical thinking and interpersonal skills to resolve conflicts.
17.03	Identify and document workplace performance goals and monitor progress toward those goals.
17.04	Conduct technical research to gather information necessary for decision-making.
18.0	Describe the roles within teams, work units, departments, organizations, inter-organizational systems, and the larger environment. The students will be able to:
18.01	Describe the nature and types of healthcare organizations.
18.02	Explain the effect of key organizational systems on performance and quality.
18.03	List and describe quality control systems and/or practices common to the workplace.
18.04	Explain the impact of the global economy on healthcare organizations.
18.05	Employ leadership skills to accomplish organizational goals and objectives.
18.06	Establish and maintain effective working relationships with others, in order to accomplish objectives and tasks.
18.07	Conduct and participate in meetings to accomplish work tasks.
18.08	Employ mentoring skills to inspire and teach others.
18.09	Analyze attributes and attitudes of an effective leader.
18.10	Recognize factors and situations that may lead to conflict.
18.11	Demonstrate effective techniques for managing team conflict.

19.0	Demonstrate the roles and responsibilities of the central supply worker. The student will be able to:

19.01	Describe professional standards related to personal hygiene and dress codes essential to maintaining a safe, clean environment for the preparation and delivery of surgical instruments to include appropriate PPE.
	• AORN standards for surgical attire.
	  ○ Surgical Scrubs
	  ○ Cover Gowns and Jackets
	  ○ Mask and Hair Covers
	  ○ Footwear
	• Hospital laundered scrubs and dedicated shoes
	  ○ Consistent Cleaning Standards
	  ○ Reduces Cross- Contamination
	  ○ Dedicated Shoes
	• Restricted, Semi - Restricted, and Unrestricted Areas
	  ○ Sterile procedures performed, operating room, and sterile processing department
	  ○ Corridors leading to operating room, sterile processing department, and areas of sterile supplies storage
	  ○ Waiting rooms, offices, and break rooms. Follow facility policy

19.02	Demonstrate the proper attire and latest standards of PPE in Decontamination. • Surgical Scrubs • Fluid-Resistant Gown • Gloves • Face Mask • Eye Protection • Hair Covers • Dedicated Footwear
19.03	Illustrate the steps that outline the proper donning and doffing procedures along with rationale behind each step. • Hand Hygiene • Hair Cover • Face Mask or N95 Respirator • Gown • Eye Protection • Gloves • Shoe Covers Doffing Procedure • Remove Gloves • Hand Hygiene • Eye Protection • Gown • Face Mask/Respirator

	• Hair Cover • Shoe Covers • Final Hand Hygiene
19.04	Identifies relevant federal, state, and local guidelines, standards and regulations.
19.05	Apply ergonomic considerations and appropriate body mechanics for lifting, turning, pulling, pushing, and reaching.

19.06	Describe policies and procedures for Surgical safety with SDS and how to Read the SDS manual for storage and injury or exposure.
	• Understanding Safety Data Sheets (SDS)
	• Policies and Procedures for Surgical Safety with SDS
	  ○ Access to SDS
	  ○ Chemical Handling
	  ○ Storage Procedures
	  ○ Reading the SDS manual
	  ○ Injury or Exposure Protocols

19.07	Describes the importance of following device, equipment, instrument or supply manufacturer's instructions for processing, operation, and troubleshooting.
20.0	Describes the function and workflow of the sterile processing department. The student will be able to:
20.01	Demonstrate the different pieces of equipment and standards for each during the processing of soiled instruments through decontamination department. Ie 3 compartment sink, ultrasound, and washer disinfector.
20.02	Describe the clean side process to begin prepping instruments
20.03	Demonstrate the packaging in either casket or wrapping, peel packaging
20.04	Explain the standards for each type of wrapping and its related sterilization.
21.0	Recognize basic principles of microbiology. The student will be able to:
21.01	Describe terms related to microbiology and the control of microorganisms in central sterile processing departments.
21.02	Identify the main categories of microorganisms.
21.03	Describe the life functions of microorganisms.
21.04	Describe conditions affecting the growth of bacteria.
21.05	Describe special methods used to destroy harmful microorganisms on fomites in the environment.
21.06	List the helpful microorganisms.

	21.07 Describe how the body controls the growth of pathogenic microorganisms.
	21.08 Identify pathogenic microorganisms commonly found in central service departments.
22.0	Interpret and apply medical terminology and anatomical terms as they relate to equipment and supplies issued by central service personnel. The student will be able to:
	22.01 Identify word elements for medical terms including the breakdown of medical specialties and anatomy that belongs in each category.
	22.02 Relate anatomical concepts to orthopedic devices and other supplies and equipment issued by the CS Department. • The student should be able to body plains and identify Laterality, as well as organ orientation. • Medical terminology breakdown for multiple surgical procedures and identify each of the organs in the specific specialty. • Describe the multiple surgical specialties and identify the related anatomy for the procedure related to each surgical procedure. • Identify the instruments that relate to each surgical specialty
23.0	Describe how central service is involved in controlling infections in hospitals. The student will be able to:
	23.01 Describe hospital acquired infections.
	23.02 Describe the types of isolation.
	23.03 Describe the organization and functions of CS.
	23.04 Describe the CS responsibilities for infection control and traffic patterns when in the operating room and other departments. • The student should be able to identify the proper temperature, humidity, and related conditions for each specific area of the department. o Decontamination o Preparation and packing o Sterile storage of instruments and soft goods.
	23.05 Identify proper storage and transportation standards for supplies in the facility (receivables, sterile, clean, or contaminated).
	23.06 Describe the organizational patterns of health care facilities.
24.0	Explain the purpose of Occupational Safety and Health Act (OSHA). The student will be able to:
	24.01 Describe how employees are protected under OSHA.
	24.02 Describe potential workplace hazards in CS. (wet floors, chemicals, fumes, gases, steam, electrical outlets, body fluids, microorganisms, sharps, and medical wastes).
	24.03 Describe the role preventive maintenance plays in patient and personnel safety in the hospital.
	24.04 Explain the purpose of Florida's "Right to Know" law and its provisions.
	24.05 Describe the protocol for personal injury including the completion of incident/occupancy reports and follow up.

	24.06 Implement appropriate regulatory and accreditation agency patient safety guidelines.
25.0	Receive, decontaminate, clean, prepare, disinfect and sterilize reusable items. The student will be able to:
	25.01 Describe the importance of thorough cleaning to the overall objectives of making items safe for patient use.
	25.02 Explain the importance of following manufacturers' instructions in cleaning each item for reprocessing.
	25.03 Describe the levels of disinfection, the cleaning process and methods of disinfection for the environment, instruments, syringes, needles, rubber goods and equipment.
	25.04 Describe the mechanisms of action for each disinfection method including ultrasonic machines and washer/sterilizers.
	25.05 Describe the strategies for managing difficult to control microorganisms that require isolation techniques and specialized decontamination methods including Creutzfeldt - Jakob disease (CJD).
	25.06 Describe the factors affecting decontamination (water temperature, loading procedures, water impurities, opening and disassembling).
	25.07 Distinguish correct reprocessing policies related to single use, limited use, and reusable items.
	25.08 Describe decontamination methods for drill systems and batteries.
	25.09 Describe the function of case cart washers, and alternative methods of cleaning.
	25.10 Describe the need for testing and monitoring all decontamination machines for proper function and cleaning agents.
	25.11 Explain the importance of using correct chemicals for cleaning in regards to water quality, PH, filters, softeners, enzymes, lubricants.
	25.12 Describe the types, characteristics, and uses of chemicals, solutions, and gases utilized for decontamination (detergents, disinfectants, enzymatics, and germicides).
	25.13 Demonstrate the decontamination process for instruments, syringes, needles, rubber goods and equipment.
	25.14 Demonstrate flexible endoscopic leak testing, decontamination, and reprocessing.
	25.15 Demonstrates decontamination and proper handling of rigid scopes.
	25.16 Describes the methods of high level disinfection including manual and automated endoscopic reprocessor (AER).
	25.17 Describe the types of sterilizers and methods of sterilization to include: • Prevac • Gravity Displacement • Gas Plasma • EQ • H202

	25.18	Describe the primary objectives in selecting the correct packaging materials for both the individual item and the sterilization method to be used.
	25.19	Describe the principles of packaging.
	25.20	Describe the characteristics of packaging materials in relationship to sterilization methods.
	25.21	Describe the principles of linen pack and tray construction/assembly.
	25.22	Describe the recommended labeling methodologies.
	25.23	Identify basic surgical procedure trays, instruments, supplies, and accessories.
	25.24	Explain the principles utilized when loading different kinds of wrapped packs or packages into a sterilizer to be assured of sterilant penetration.
	25.25	Recognize equipment malfunction and list corrective actions.
	25.26	Demonstrate the ability to package, wrap and protect the instruments in each sterilizer by identifying the IFU from the manufacturer.
	25.27	Demonstrate loading of different kinds of wrapped packs or packages into a sterilizer to be assured of sterilant penetration.
	25.28	Describe how sterile supplies should be handled.
	25.29	Demonstrate handling, transportation and storage of clean, sterile and nonsterile supplies and equipment.
26.0	Demonstrate flexible endoscopic leak testing, decontamination, and reprocessing. The student will be able to:	
	26.01	Demonstrate the process of Leak testing and why this is microbiologically important.
	26.02	Demonstrate the process of using the AER and the use of IFU for Each type.
	26.03	Describe the chemicals and solutions for HLD (High Level Disinfection chemicals. • High-Level Disinfection chemicals and what their parameters are: OPA, and Glutaraldehyde. • The proper disposal and handling of HLD. • The MLE Minimal Level of Effectiveness for each HLD
27.0	Demonstrate the use of sterilization process monitors, including temperature and frequency of appropriate chemical indicators and bacterial spore tests for all sterilizers. The student will be able to:	
	27.01	Describe the types of sterilization, sterilization cycles, and parameters for each.
	27.02	Describe the importance of the manufacturer's recommendations for the safe operation of each type of sterilizer.
	27.03	Describe the methods of sterilization monitoring.
	27.04	Demonstrate the process of preparing and documenting the sterilizer load contents for each sterilizer correctly according to the manufacturer's recommendations.

	27.05	Demonstrate the operation, testing, and monitoring of sterilizers.
	27.06	Demonstrate the ability to interpret and document monitoring devices, printouts, and charts accurately for each sterilization system utilized.
	27.07	Identify the standards for, and facility policy regarding, frequency of monitoring for all sterilizers.
28.0	Demonstrate the ability to identify and select appropriate instrumentation or equipment that meets the needs of the surgical specialty. The student will be able to:	
	28.01	Describe instrument terminology and identify the anatomy of surgical instruments (jaws, shanks, box locks, rings, etc.).
	28.02	Describe the types and functions of instruments.
	28.03	Describe the types of instrument construction.
	28.04	Demonstrate appropriate techniques for inspection and testing of instruments.
	28.05	Identify instrumentation and equipment by name and usage. • 80 primary instruments for use in the majority of trays. • I.e., hemostatic clamps, forceps, accessory clamps, dissection, needle holders, handheld retractors, self-retaining retractors, and table mounted retractors.
	28.06	Correctly label instrumentation and equipment.
	28.07	Demonstrate the methods of instrument identification, marking, and tracking of use.
	28.08	Demonstrate the assembly of various instrument sets and surgical specialty equipment.
	28.09	Demonstrate the process regarding the manufacturer's recommendations for instrument and equipment care including handling, operation, maintenance, and troubleshooting.
29.0	Define the use of Robotics in Central Sterile Processing Technology. The student will be able to:	
	29.01	Explain the concept of Robotic surgery and how the equipment is used that requires processing by SPD.
	29.02	Demonstrate the care and handling of the scope and instrumentation for the robotic arms.
	29.03	Explain the cleaning process for robotic instruments.
	29.04	Explain the process for limited use instruments and the concepts of use and processing at end of life.
	29.05	Demonstrate the care, handling of the robotic scope and camera cleaning.
	29.06	Demonstrate the sterilization process for the robotic arm instruments.
	29.07	Demonstrate the sterilization process for the robotic camera and scope assembly.

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as, experimental, quality, and safety procedures are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate and troubleshoot equipment/tools used to make observations. Students understand measurement error; and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

Special Notes

This program meets the Department of Health's education requirements for HIV/AIDS, Domestic Violence and Prevention of Medical Errors. Although not a requirement for initial licensure, it is a requirement for renewal, therefore the instructor **may** provide a certificate for renewal purposes to the student verifying these requirements have been met.

If students in this program are seeking a licensure, certificate or registration through the Department of Health, please refer to s. 456.0635, F.S. for more information on disqualification for a license, certificate, or registration through the Department of Health.

Inquiries about a voluntary certification for sterile processing and distribution may be made to:
Healthcare Sterile Processing Association (HSPA)/
International Association of Hospital Central Service Materiel Management (IAHCSMM)
https://myhspa.org/certification/iahcsmm-certifications.html
55 West Wacker Drive, Suite 501, Chicago, IL 60601
Toll Free: 800-962-8274

The Core should be taken first in the program. Following the successful completion of the core, the student is eligible to take the National Health Care Foundation Skill Standards Assessment with instructor approval and the completion of a portfolio.

Career and Technical Student Organization (CTSO)

CTSOs are co-curricular career and technical student organizations providing leadership training and reinforcing specific career and technical skills. Career and Technical Student Organizations provide activities for students as an integral part of the instruction offered. Other CTSOs not listed in this curriculum framework or recognized by the Florida Department of Education are permissible provided they support student mastery over the standards and benchmarks of this curriculum framework.

Cooperative Training – OJT

On-the-job training is appropriate but not required for this program. Whenever offered, the rules, guidelines, and requirements specified in the OJT framework apply.

Basic Skills

In Career Certificate programs offered for 450 hours or more, in accordance with Rule 6A-10.040, F.A.C., the minimum basic skills grade levels required for postsecondary adult career and technical students to complete this program are: Computation (Mathematics) and Communications (Reading and Language Arts). These grade level numbers correspond to a grade equivalent score obtained on a state designated basic skills examination.

Adult students with disabilities, as defined in Section 1004.02, Florida Statutes, may be exempted from meeting the Basic Skills requirements (Rule 6A-10.040). Students served in exceptional student education (except gifted) as defined in s. 1003.01, F.S., may also be exempted from meeting the Basic Skills requirement. Each school district and Florida College System Institution must adopt a policy addressing procedures for exempting eligible students with disabilities from the Basic Skills requirement as permitted in Section 1004.91, F.S.

Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

Note: postsecondary curriculum and regulated secondary programs cannot be modified.

Florida Department of Education
Curriculum Framework

The standards and benchmarks for this program were updated for the 2026-27 academic year.

Program Title: **Phlebotomy**
Program Type: **Career Preparatory**
Career Cluster: **Health Science**

Career Certificate Program	
Program Number	H170302
CIP Number	0351100901
Grade Level	30, 31
Program Length	165 hours
Teacher Certification	Refer to the **Program Structure** section.
CTSO	HOSA
SOC Codes (all applicable)	For program SOC codes, please see the Program and Course Tables section of the CTE Program Resources page linked below.
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml
Basic Skills Level	N/A

Purpose

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Health Science career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of Health Science career cluster.

The purpose of this program is to prepare students for employment as phlebotomists.

The content includes but is not limited to communication, leadership, human relations, and employability skills; performance of safe and efficient work practices in obtaining adequate and correct blood specimens by capillary or venipuncture on adults, children and neonates; maintaining the integrity of the specimen in relation to the test to be performed; preparing blood smears; labeling specimens accurately and completely; collecting timed specimens; promoting the comfort and well-being of the patient while performing blood collecting duties; observing safety policies and procedures; medical terminology; emergency procedures including CPR (Heartsaver); delivering a variety of clinical specimens to the clinical

laboratory; sorting and recording specimens received in the laboratory; centrifuging specimens and preparing aliquots of samples according to the designated protocol; distributing samples to appropriate laboratory sections; and preparing collection trays for specimen procurement.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Program Structure

This program is a planned sequence of instruction consisting of 2 occupational completion points.

This program is comprised of courses which have been assigned course numbers in the SCNS (Statewide Course Numbering System) in accordance with Section 1007.24 (1), F.S. Career and Technical credit shall be awarded to the student on a transcript in accordance with Section 1001.44(3) (b), F.S.

To teach the courses listed below, instructors must hold at least one of the teacher certifications indicated for that course.

The following table illustrates the postsecondary program structure:

OCP	Course Number	Course Title	Teacher Certification	Length
A	HSC0003	Basic Healthcare Worker	PHLEB 7G LAB TECH @7 7G MED ASST 7G LPN 7G PARAMEDIC @7 7G REG NURSE 7 G RESP THER @7 7G PRAC NURSE @7 %7%G (Must be a Registered Nurse)	90 hours
B	MEA0520	Phlebotomist		75 hours

Florida's Career Readiness Skills for CTE Programs

Employability Skills	
01.0	Apply academic skills to workplace scenarios.
01.01	Use reading skills.
01.02	Use writing skills.
01.03	Use mathematical strategies and procedures.
01.04	Use scientific principles and procedures.
02.0	Design a solution to an industry problem.
02.01	Use critical thinking.
02.02	Use creativity.
02.03	Make sound decisions.
02.04	Solve problems.
02.05	Reason.
02.06	Plan and organize.
03.0	Manage resources within an industry project
03.01	Manage time.
03.02	Manage money or resources.
03.03	Manage materials.
03.04	Manage personnel.
04.0	Oversee the subcomponents, operations and output of a technical or organizational system.
04.01	Manage systems.
04.02	Monitor systems.
04.03	Improve systems.
05.0	Use information for decision making.
05.01	Locate information.
05.02	Organize information.
05.03	Use information.

	05.04 Analyze information.
	05.05 Communicate information.
06.0	Apply relevant technology to workplace scenarios to aid productivity.
	06.01 Use technology.
07.0	Interpret and express interpersonal communication.
	07.01 Communicate verbally.
	07.02 Listen actively.
	07.03 Comprehend written material.
	07.04 Convey information in writing.
	07.05 Communicate nonverbally.
	07.06 Interpret nonverbal communication.
08.0	Interact with others to accomplish workplace goals.
	08.01 Collaborate with others in a team.
	08.02 Respond to customer needs.
	08.03 Exercise leadership.
	08.04 Negotiate to resolve conflict.
	08.05 Respect others.
09.0	Manage personal behavior to maximize productivity and professional growth.
	09.01 Demonstrate responsibility and self-discipline.
	09.02 Adapt and show flexibility.
	09.03 Work independently.
	09.04 Demonstrate a willingness to learn.
	09.05 Demonstrate integrity.
	09.06 Demonstrate professionalism.
	09.07 Take initiative.
	09.08 Display positive attitude.
	09.09 Take responsibility for professional growth.

Job Attainment	
10.0	Find, assess and apply to job opportunities.
10.01	Identify online job posts relevant to his or her career aspirations.
10.02	Compare and contrast the job posts' required qualifications, job duties, compensation, benefits and employers.
10.03	Define what information, documentation and writing prompts are required for the positions.
11.0	Communicate personal competence, character and fit for a job opportunity.
11.01	Develop a resume.
11.02	Write a cover letter.
11.03	Curate a professional portfolio that includes work products.
11.04	Prepare for and experience a mock job interview.
12.0	Cultivate and leverage relationships to professionally advance.
12.01	Request a signed reference letter, letter of recommendation and/or an online skill/professionalism endorsement.
12.02	Develop a plan to cultivate a professional digital footprint.
12.03	Develop a networking plan for a specific industry of interest.

Standards

After successfully completing this program, the student will be able to perform the following:

01.0 Demonstrate knowledge of the healthcare delivery system and health occupations.
02.0 Demonstrate the ability to communicate and use interpersonal skills effectively.
03.0 Demonstrate legal and ethical responsibilities.
04.0 Demonstrate an understanding of and apply wellness and disease concepts.
05.0 Recognize and practice safety and security procedures.
06.0 Recognize and respond to emergency situations.
07.0 Recognize and practice infection control procedures.
08.0 Demonstrate an understanding of information technology applications in healthcare.
09.0 Demonstrate employability skills.
10.0 Demonstrate knowledge of blood-borne diseases, including HIV/AIDS.
11.0 Apply basic math and science skills.
12.0 Demonstrate accepted professional, communication, and interpersonal skills as related to phlebotomy.
13.0 Discuss phlebotomy in relation to the healthcare setting.
14.0 Identify the anatomic structure and function of body systems in relation to services performed by the phlebotomist.
15.0 Recognize and identify collection reagents supplies, equipment, and interfering chemical substances.
16.0 Demonstrate skills and knowledge necessary to perform phlebotomy.
17.0 Practice infection control following standard precautions.
18.0 Practice accepted procedures of transporting, accessioning, and processing specimens.
19.0 Practice quality assurance and safety.

Florida Department of Education
Student Performance Standards

Program Title: Phlebotomy
Career Certificate Program Number: H170302

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Course Number: HSC0003
Occupational Completion Point: A
Basic Healthcare Worker – 90 Hours

To ensure consistency whenever these courses are offered, the health science core standards (1-11) and benchmarks have been placed in a separate document. To access this document, visit this link:
https://www.fldoe.org/file/20894/health-sci-core-psav-cc-2627.rtf

Course Number: MEA0520
Occupational Completion Point: B
Phlebotomist – 75 Hours

12.0	Demonstrate accepted professional, communication, and interpersonal skills as related to phlebotomy. The student will be able to:
12.01	Demonstrate the appropriate professional behavior of a phlebotomist and describe the scope of practice (job skills and duties).
12.02	Explain to the patient the procedure to be used in specimen collection.
12.03	Explain in detail the importance of identifying patients correctly when drawing blood.
12.04	Explain the importance of continuing education in relation to certification to maintain competency and skills.
13.0	Discuss phlebotomy in relation to the healthcare setting. The student will be able to:
13.01	List, classify, and discuss various departments and services within the healthcare setting in which the phlebotomist must interact with to obtain laboratory specimens from patients.
13.02	Identify the major departments/sections within the clinical laboratory, the major types of procedures run in each department/section, and their specimen requirements.
13.03	Describe roles of the major classifications of clinical laboratory personnel (i.e., pathologist, chief/administrative technologist, CLS, MLS, MLT, MT, phlebotomist, lab assistant, etc.).
14.0	Identify the anatomic structure and function of body systems in relation to services performed by the phlebotomist. The student will be able

	to:
	14.01 Describe and define major body systems with emphasis on the circulatory system.
	14.02 List and describe the main superficial veins used in performing venipuncture.
	14.03 Locate the most appropriate site(s) for capillary and venipuncture.
	14.04 Describe the function of the following blood components: erythrocytes, thrombocytes, leukocytes, and plasma.
	14.05 Compare and contrast serum and plasma as they relate to blood collection.
	14.06 Discuss hemostasis, hemolysis, and methods of prevention as they relate to blood collection.
15.0	Recognize and identify collection reagents supplies, equipment, and interfering chemical substances. The student will be able to:
	15.01 Identify and discuss the proper use of appropriate types of equipment needed to collect various clinical laboratory blood specimens by venipuncture.
	15.02 Explain the special precautions and types of equipment needed to collect blood from the pediatric patient.
	15.03 Identify and discuss the proper use of supplies used in collecting short-draw specimens or difficult draws.
	15.04 Identify and discuss the proper use of the various types of anticoagulants, preservatives, and gels used in blood collection, and the vacuum tube color-codes for these additives.
	15.05 Describe the types of specimens that are analyzed in the clinical laboratory and the phlebotomist's role in collecting and/or transporting these specimens to the laboratory.
	15.06 Describe substances potentially encountered during phlebotomy that can interfere in the analysis of blood constituents.
	15.07 Define and utilize correct medical terminology and metric measurement needed for specimen collection.
16.0	Demonstrate skills and knowledge necessary to perform phlebotomy. The student will be able to:
	16.01 Follow approved procedure for completing a laboratory requisition form and recognize a properly completed form.
	16.02 Demonstrate knowledge of established protocol for patient and specimen identification.
	16.03 Discuss appropriate methods for facilitating and preparing the patient for capillary and venipuncture collection.
	16.04 List appropriate antiseptic agents useful in preparing sites for capillary and venipuncture for adult and pediatric patients.
	16.05 Perform venipuncture by evacuated tube, butterfly, and syringe systems, demonstrating appropriate use of supplies, proper handling of equipment and specimens, and appropriate patient care.
	16.06 Describe the correct order of draw.

	16.07 Describe the use of barcoding systems used for specimen collection.
	16.08 Convey an understanding of capillary puncture using appropriate supplies and techniques for adult and pediatric patients.
	16.09 Describe the most common complications associated with capillary and venipuncture, their causes, prevention, and treatment.
	16.10 Recognize and respond to possible adverse patient reactions such as allergies, convulsions, syncope, lightheadedness, vomiting, and nerve involvement.
	16.11 Perform appropriate procedures for disposing of used or contaminated capillary and venipuncture supplies.
	16.12 Demonstrate the proper procedure for collecting blood cultures.
	16.13 Demonstrate a working understanding of how the age and weight of patients impact the maximum amount of blood that can be safely drawn.
17.0	Practice infection control following standard precautions. The student will be able to:
	17.01 Define the term “hospital-acquired infection.”
	17.02 Describe and practice procedures for infection prevention, including hand washing skills.
	17.03 Discuss transmission-based precautions.
	17.04 Identify potential routes of infection and their complications.
18.0	Practice accepted procedures of transporting, accessioning, and processing specimens. The student will be able to:
	18.01 Instruct patients in the proper collection of urine (clean catch, mid-stream), sputum, and stool specimens.
	18.02 Follow the approved procedure for preparation and processing (e.g., centrifugation, separation, aliquoting, labeling, and storage) of serum, plasma, urine, sputum, stool, and wound culture specimens.
	18.03 Describe the significance of time constraints for specimen collection, transporting, and delivery.
	18.04 Describe routine procedures for transporting and processing specimens, including DOT packaging requirements.
19.0	Practice quality assurance and safety. The student will be able to:
	19.01 Distinguish and perform procedures that ensure the reliability of test results when collecting blood specimens.
	19.02 Practice appropriate patient safety.
	19.03 Practice safety in accordance with OSHA (State & Federal guidelines) for chemical, biological, and PPE established procedures, including proper disposal of sharps and biohazardous materials.
	19.04 Follow documentation procedures for work-related accidents.

19.05 Implement appropriate Joint Commission patient safety goals and other accrediting/regulatory agency guidelines.

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as, experimental, quality, and safety procedures are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate, and troubleshoot equipment/tools used to make observations. Students understand measurement error and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

Special Notes

This program meets the Department of Health's education requirements for HIV/AIDS, Domestic Violence, and Prevention of Medical Errors. Although not a requirement for initial licensure, it is a requirement for renewal, therefore, the instructor **may** provide a certificate for renewal purposes to the student verifying these requirements have been met.

If students in this program are seeking a licensure, certificate, or registration through the Department of Health, please refer to 456.0635, F.S. for more information on disqualification for a license, certificate, or registration through the Department of Health.

A voluntary national certification is available through an exam offered by:
The National Health Career Association www.nhanow.com
7500 West 160th Street, Stilwell, Kansas 66085
Phone: 800-499-9092 x8223, Fax: 973-644-4797

To be eligible, students must:

1. Have a High School Diploma or equivalency and have completed an NHA approved training program.
   OR
2. Have a High School Diploma or equivalency and have worked in the field for a minimum of one year.

Although there is no state licensure required for phlebotomists, graduates with required amounts of work experience may obtain certification from national credentialing agencies such as the American Society of Clinical Pathologists (ASCP) and the American Society of Phlebotomy Technicians (ASPT), and the American Medical Technologists (AMT).

The Core should be taken first in the program. Following the successful completion of the core, the student is eligible to take the National Health Care Foundation Skill Standards Assessment with instructor approval and the completion of a portfolio.

Career and Technical Student Organization (CTSO)

CTSOs are co-curricular career and technical student organizations providing leadership training and reinforcing specific career and technical skills. Career and Technical Student Organizations provide activities for students as an integral part of the instruction offered. Other CTSOs not listed in this curriculum framework or recognized by the Florida Department of Education are permissible provided they support student mastery over the standards and benchmarks of this curriculum framework.

Cooperative Training – OJT

On-the-job training is appropriate but not required for this program. Whenever offered, the rules, guidelines, and requirements specified in the OJT framework apply.

Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology, and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

Note: postsecondary curriculum and regulated secondary programs cannot be modified.

Florida Department of Education
Curriculum Framework

The standards and benchmarks for this program were updated for the 2026-27 academic year.

Program Title: **Medical Laboratory Assisting**
Program Type: **Career Preparatory**
Career Cluster: **Health Science**

Career Certificate Program		
Program Number	H170306	
CIP Number	0351080201	
Grade Level	30, 31	
Program Length	465 hours	
Teacher Certification	Refer to the **Program Structure** section.	
CTSO	HOSA	
SOC Codes (all applicable)	For program SOC codes, please see the Program and Course Tables section of the CTE Program Resources page linked below.	
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml	
Basic Skills Level	Computation (Mathematics): 9	Communications (Reading and Language Arts): 11

Purpose

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Health Science career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of Health Science career cluster. The purpose of this program is to prepare students for employment as medical laboratory aides, Medical and Clinical Laboratory Technicians.

The content includes, but is not limited to, communication, interpersonal, and professional skills, appropriate scientific principles of microbiology, chemistry, physics, anatomy, and physiology integrated into skill development and clinical learning.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Program Structure

This program is a planned sequence of instruction consisting of 3 occupational completion points.

This program is comprised of courses which have been assigned course numbers in the SCNS (Statewide Course Numbering System) in accordance with Section 1007.24 (1), F.S. Career and Technical credit shall be awarded to the student on a transcript in accordance with Section 1001.44(3) (b), F.S.

To teach the courses listed below, instructors must hold at least one of the teacher certifications indicated for that course.

The following table illustrates the postsecondary program structure:

OCP	Course Number	Course Title	Teacher Certification	Length
A	HSC0003	Basic Healthcare Worker	LAB TECH @7 7G	90 hours
B	MEA0520	Phlebotomist	LAB TECH @7 7G MED ASST 7G PARAMEDIC @7 7G REG NURSE 7 G RESP THER @7 7G PRAC NURSE @7 %7%G (Must be a Registered Nurse)	75 hours
C	MEA0560	Medical Lab Assistant	LAB TECH @7 7G	300 hours

Florida's Career Readiness Skills for CTE Programs

Employability Skills	
01.0	Apply academic skills to workplace scenarios.
01.01	Use reading skills.
01.02	Use writing skills.
01.03	Use mathematical strategies and procedures.
01.04	Use scientific principles and procedures.
02.0	Design a solution to an industry problem.
02.01	Use critical thinking.
02.02	Use creativity.
02.03	Make sound decisions.
02.04	Solve problems.
02.05	Reason.
02.06	Plan and organize.
03.0	Manage resources within an industry project
03.01	Manage time.
03.02	Manage money or resources.
03.03	Manage materials.
03.04	Manage personnel.
04.0	Oversee the subcomponents, operations and output of a technical or organizational system.
04.01	Manage systems.
04.02	Monitor systems.
04.03	Improve systems.
05.0	Use information for decision making.
05.01	Locate information.
05.02	Organize information.
05.03	Use information.

	05.04 Analyze information.
	05.05 Communicate information.
06.0	Apply relevant technology to workplace scenarios to aid productivity.
	06.01 Use technology.
07.0	Interpret and express interpersonal communication.
	07.01 Communicate verbally.
	07.02 Listen actively.
	07.03 Comprehend written material.
	07.04 Convey information in writing.
	07.05 Communicate nonverbally.
	07.06 Interpret nonverbal communication.
08.0	Interact with others to accomplish workplace goals.
	08.01 Collaborate with others in a team.
	08.02 Respond to customer needs.
	08.03 Exercise leadership.
	08.04 Negotiate to resolve conflict.
	08.05 Respect others.
09.0	Manage personal behavior to maximize productivity and professional growth.
	09.01 Demonstrate responsibility and self-discipline.
	09.02 Adapt and show flexibility.
	09.03 Work independently.
	09.04 Demonstrate a willingness to learn.
	09.05 Demonstrate integrity.
	09.06 Demonstrate professionalism.
	09.07 Take initiative.
	09.08 Display positive attitude.
	09.09 Take responsibility for professional growth.

Job Attainment	
10.0	Find, assess and apply to job opportunities.
10.01	Identify online job posts relevant to his or her career aspirations.
10.02	Compare and contrast the job posts' required qualifications, job duties, compensation, benefits and employers.
10.03	Define what information, documentation and writing prompts are required for the positions.
11.0	Communicate personal competence, character and fit for a job opportunity.
11.01	Develop a resume.
11.02	Write a cover letter.
11.03	Curate a professional portfolio that includes work products.
11.04	Prepare for and experience a mock job interview.
12.0	Cultivate and leverage relationships to professionally advance.
12.01	Request a signed reference letter, letter of recommendation and/or an online skill/professionalism endorsement.
12.02	Develop a plan to cultivate a professional digital footprint.
12.03	Develop a networking plan for a specific industry of interest.

Standards

After successfully completing this program, the student will be able to perform the following:

01.0 Demonstrate knowledge of the healthcare delivery system and health occupations.
02.0 Demonstrate the ability to communicate and use interpersonal skills effectively.
03.0 Demonstrate legal and ethical responsibilities.
04.0 Demonstrate an understanding of and apply wellness and disease concepts.
05.0 Recognize and practice safety and security procedures.
06.0 Recognize and respond to emergency situations.
07.0 Recognize and practice infection control procedures.
08.0 Demonstrate an understanding of information technology applications in healthcare.
09.0 Demonstrate employability skills.
10.0 Demonstrate knowledge of blood-borne diseases, including HIV/AIDS.
11.0 Apply basic math and science skills.
12.0 Demonstrate accepted professional, communication, and interpersonal skills.
13.0 Discuss phlebotomy in relation to the health care setting.
14.0 Identify the anatomic structure and function of body systems in relation to services performed by the phlebotomist.
15.0 Recognize and identify collection reagents, supplies, equipment, and interfering chemical substances.
16.0 Demonstrate skills and knowledge necessary to perform phlebotomy.
17.0 Practice infection control following standard precautions.
18.0 Practice accepted procedures of transporting, accessioning, and processing specimens.
19.0 Practice quality assurance and safety.
20.0 Identify the federal and state laws that regulate the provision of laboratory services, including CLIA, Florida Statutes, and Florida Administrative Code.
21.0 Demonstrate basic knowledge of microbiology.
22.0 Demonstrate basic knowledge of urinalysis.
23.0 Demonstrate basic knowledge of clinical chemistry.
24.0 Demonstrate basic knowledge of hematology.
25.0 Demonstrate basic knowledge of Immunohematology.
26.0 Demonstrate the basic knowledge of and perform clinical laboratory Point of Care (POC) testing (Waived).
27.0 Successfully complete learning experiences in the clinical setting.

Florida Department of Education
Student Performance Standards

Program Title: **Medical Laboratory Assisting**
Career Certificate Program Number: **H170306**

The **Basic Health Care Worker (HSC0003)** is referred to as the **Health Science Core** and is the first OCP in the majority of the Career Certificate Program health science programs. Secondary and Postsecondary students completing the health science core will not have to repeat the core in any other health science program in which it is a part. When the recommended sequence is followed, the structure allows students to complete at specified points for employment or remain for advanced training or cross-training.

Course Number: HSC0003
Occupational Completion Point: A
Basic Healthcare Worker – 90 Hours

To ensure consistency whenever these courses are offered, the health science core standards (1-11) and benchmarks have been placed in a separate document. To access this document, visit this link:
https://www.fldoe.org/file/20894/health-sci-core-psav-cc-2627.rtf

Course Number: MEA0520
Occupational Completion Point: B
Phlebotomist – 75 Hours

12.0	Demonstrate accepted professional, communication, and interpersonal skills. The student will be able to:	
	12.01	Demonstrate the appropriate professional behavior of a phlebotomist and describe the scope of practice (job skills and duties) for a phlebotomist.
	12.02	Explain to the patient the procedure to be used in specimen collection.
	12.03	Explain in detail the importance of identifying patients correctly when drawing blood.
	12.04	Explain the importance of continuing education in relation to certification to maintain competency and skills.
13.0	Discuss phlebotomy in relation to the health care setting. The student will be able to:	
	13.01	List, classify, and discuss various departments and services within the health care setting in which the phlebotomist must interact with to obtain laboratory specimens from patients.
	13.02	Identify the major departments/sections with the clinical laboratory, the major types of procedures run in each department/section, and their specimen requirements.
	13.03	Describe roles of the major classifications of clinical laboratory personnel (i.e., pathologist, chief/administrative technologist, CLS, MLS, MLT, MT, phlebotomist, lab assistant, etc.).

14.0	Identify the anatomic structure and function of body systems in relation to services performed by the phlebotomist. The student will be able to:
14.01	Describe and define major body systems with emphasis on the circulatory system.
14.02	List and describe the main superficial veins used in performing venipuncture.
14.03	Locate the most appropriate sites(s) for capillary and venipuncture.
14.04	Describe the function of the following blood components: erythrocytes, thrombocytes, leukocytes, and plasma.
14.05	Compare and contrast serum and plasma as they relate to blood collection.
14.06	Discuss hemostasis, hemolysis, and methods of prevention as they relate to blood collection.
15.0	Recognize and identify collection reagents supplies, equipment, and interfering chemical substances. The student will be able to:
15.01	Identify and discuss the proper use of appropriate types of equipment needed to collect various clinical laboratory blood specimens by venipuncture.
15.02	Explain the special precautions and types of equipment needed to collect blood from the pediatric patient.
15.03	Identify and discuss the proper use of supplies used in collecting short-draw specimens or difficult draws.
15.04	Identify and discuss the proper use of the various types of anticoagulants, preservatives, and gels used in blood collection, and the vacuum tube color-codes for these additives.
15.05	Describe the types of specimens that are analyzed in the clinical laboratory and the phlebotomist's role in collecting and/or transporting these specimens to the laboratory.
15.06	Describe substances potentially encountered during phlebotomy that can interfere in the analysis of blood constituents.
15.07	Define and utilize correct medical terminology and metric measurement needed for specimen collection.
16.0	Demonstrate skills and knowledge necessary to perform phlebotomy. The student will be able to:
16.01	Follow approved procedure for completing a laboratory requisition form and recognize a properly completed form.
16.02	Demonstrate knowledge of established protocol for patient and specimen identification.
16.03	Discuss appropriate methods for facilitating and preparing the patient for capillary and venipuncture collection.
16.04	List appropriate antiseptic agents useful in preparing sites for capillary and venipuncture for adult and pediatric patients.
16.05	Perform venipuncture by evacuated tube, butterfly, and syringe systems, demonstrating appropriate use of supplies, proper handling of equipment and specimens, and appropriate patient care.
16.06	Describe the correct order of draw.

	16.07 Describe the use of barcoding systems used for specimen collection.
	16.08 Convey an understanding of capillary puncture using appropriate supplies and techniques for both adult and pediatric patients.
	16.09 Describe the most common complications associated with capillary and venipuncture, their causes, prevention, and treatment.
	16.10 Recognize and respond to possible adverse patient reactions such as allergies, convulsions, syncope, lightheadedness, vomiting, and nerve involvement.
	16.11 Perform appropriate procedures for disposing of used or contaminated capillary and venipuncture supplies.
	16.12 Demonstrate the proper procedure for collecting blood cultures.
	16.13 Demonstrate a working understanding of how the age and weight of patients impact the maximum amount of blood that can be safely drawn.
17.0	Practice infection control following standard precautions. The student will be able to:
	17.01 Define the term “hospital-acquired infection.”
	17.02 Describe and practice procedures for infection prevention, including hand washing skills.
	17.03 Discuss transmission-based precautions.
	17.04 Identify potential routes of infection and their complications.
18.0	Practice accepted procedures of transporting, accessioning, and processing specimens. The student will be able to:
	18.01 Instruct patients in the proper collection of urine (clean catch, mid-stream), sputum, and stool specimens.
	18.02 Follow the approved procedure for preparation and processing (e.g., centrifugation, separation, aliquoting, labeling, and storage) of serum, plasma, urine, sputum, stool, and wound culture specimens.
	18.03 Describe the significance of time constraints for specimen collection, transporting, and delivery.
	18.04 Describe routine procedures for transporting and processing specimens, including DOT packaging requirements.
19.0	Practice quality assurance and safety. The student will be able to:
	19.01 Distinguish and perform procedures that ensure the reliability of test results when collecting blood specimens.
	19.02 Practice appropriate patient safety.
	19.03 Practice safety in accordance with OSHA (State & Federal guidelines) for chemical, biological, and PPE established procedures, including proper disposal of sharps and biohazardous materials.
	19.04 Follow documentation procedures for work-related accidents.

19.05	Implement appropriate Joint Commission patient safety goals and other accrediting/regulatory agency guidelines.

Course Number: MEA0560 Occupational Completion Point: C Medical Lab Assistant – 300 Hours	
20.0	Identify the federal and state laws that regulate the provision of laboratory services, including CLIA, Florida Statutes, and Florida Administrative Code. The student will be able to:
20.01	Explain the CLIA test complexity model and describe the characteristics required for FDA classification of a test as waived.
20.02	Understand the CLIA 88 classification of laboratory testing into waived, moderate, and highly complex, including the personnel qualified to perform each.
20.03	Explain the categories of testing personnel established by both CLIA and Florida regulations and describe the basic educational and/or experiential qualifications for each category.
20.04	Explain the differences in requirements for a physician practice laboratory, a hospital laboratory, and an independent clinical laboratory.
20.05	Describe Alternate Site Testing requirements as they apply to hospitals in Florida, and compare and contrast these with the requirements of the Federal CLIA program and their four types of certificates: • Certificate of Waiver • Certificate of Provider Performed Microscopy. • Certificate of Compliance • Certificate of Accreditation Apply the concepts of Point-of-Care or Near Patient testing to these requirements.
20.06	Demonstrate an understanding of the concepts of “scope of practice”, “professional judgment”, and “duty/obligation to report”.
21.0	Demonstrate basic knowledge of microbiology. The student will be able to:
21.01	Perform techniques of microbiology related to disinfection techniques.
21.02	Discuss techniques of microbiology related to isolation techniques.
21.03	Perform techniques of microbiology related to sterilization techniques.
21.04	Perform techniques of microbiology related to slide preparation.
21.05	Describe the basic operation and principles related to the usage of microscopes.
21.06	Understand the staining and microscopic examination of Gram stains.
21.07	Discuss the significance of selecting appropriate transport media and primary culture media for a given specimen type.

	21.08 Perform basic techniques of microbiology with respect to routine and emergency specimen collection, including time constraints.
	21.09 Perform basic techniques related to inoculation of primary culture media and transfer of cultures.
	21.10 Discuss classification, composition and preparation of culture media.
	21.11 Discuss how sample collection techniques can impact microbiological tests and the interpretation of cultures.
22.0	Demonstrate basic knowledge of urinalysis. The student will be able to:
	22.01 Understand urinalysis techniques related to normal and abnormal components of the urine.
	22.02 Perform urinalysis techniques related to the collection and preservation of specimens, including time constraints.
	22.03 Perform urinalysis techniques related to the physical properties of urine.
	22.04 Perform urinalysis techniques related to chemical analysis of urine.
	22.05 Describe the clinical significance of abnormal chemical analyses of urine.
	22.06 Discuss urinalysis techniques related to the determination of urine specific gravity.
	22.07 Discuss urinalysis techniques related to the microscopic identification of significant elements.
	22.08 Perform urinalysis techniques related to principles and use of centrifuge.
23.0	Demonstrate basic knowledge of clinical chemistry. The student will be able to:
	23.01 Perform techniques of clinical chemistry related to metric measurement and use of labware, including reconstituting reagents and preparing dilutions.
	23.02 Perform techniques of clinical chemistry related to reagent preparation, laboratory equipment, and laboratory techniques.
	23.03 Discuss techniques of clinical chemistry related to standardization of procedures and use of standards, blanks, and controls.
	23.04 Discuss the importance of Quality Assurance as it relates to patient results.
	23.05 Discuss principles of common clinical chemistry analyzers, including visual colorimetry and spectrophotometry.
	23.06 Demonstrate basic understanding of the relationship between common clinical chemical tests and specific body systems and disorders.
24.0	Demonstrate basic knowledge of hematology. The student will be able to:
	24.01 Discuss techniques of hematology related to counting formed elements of blood.

	24.02 Perform techniques of hematology related to preparation and staining.
	24.03 Discuss techniques of cell differential microscopic examination of blood films.
	24.04 Perform appropriate techniques for making a peripheral blood smear for hematologic evaluation.
	24.05 Perform techniques of hematology related to spun hematocrit tests.
	24.06 Discuss techniques of hematology related to the use of platelet function analyzing instruments.
	24.07 Perform techniques of hematology related to hemoglobin tests.
	24.08 Understand the use of and importance of red blood cell indices.
	24.09 Discuss basic techniques of hematology related to normal and abnormal physiology.
25.0	Demonstrate basic knowledge of Immunohematology. The student will be able to:
	25.01 Discuss the functions of the Immunohematology department.
	25.02 Understand the significance of the ABO blood group system and Rh blood group system in transfusion medicine.
	25.03 Discuss the significance of forward typing and reverse typing in determination of a patient or donor ABO type.
	25.04 Discuss the performance and interpretation of ABO and Rh typing tests.
	25.05 Define hemagglutination and describe antibody-antigen reactions as they relate to ABO/Rh typing tests.
	25.06 Discuss Rh typing and interpret the results.
	25.07 Explain the process of blood donation and the requirements necessary to donate blood.
	25.08 Discuss tests performed on donated blood before it can be transfused
	25.09 Explain the three blood components that can be obtained from a unit of donated whole blood and how these components would be beneficial to patients.
26.0	Demonstrate the basic knowledge of and perform clinical laboratory Point of Care (POC) testing (Waived). The student will be able to:

	26.01	Demonstrate the ability to interpret instructions of point of care testing specific to microbiology, hematology, urinalysis, and clinical chemistry, including, but not limited to the following: • Test principle • Storage and stability • Internal vs. external quality control • Specimen collection and preparation • Directions for use • Interpretation of results • Interfering substances
	26.02	Identify normal limits and associate abnormal results with disease and disorders.
	26.03	Perform instrument maintenance.
	26.04	Discuss the significance of reporting critical values as it applies to Point of Care testing.
	26.05	Demonstrate knowledge of the frequency in which quality control procedures should be performed.
27.0		Successfully complete learning experiences in the clinical setting. The student will be able to:
	27.01	Observe and, as appropriate, participate in the skills outlined in outcomes for medical lab assisting.
	27.02	Complete clinical rotations.

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools, and equipment, as well as experimental, quality, and safety procedures, are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate, and troubleshoot equipment/tools used to make observations. Students understand measurement error and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

Special Notes

This program meets the Department of Health's education requirements for HIV/AIDS, Domestic Violence, and Prevention of Medical Errors. Although not a requirement for initial licensure, it is a requirement for renewal, therefore, the instructor **may** provide a certificate for renewal purposes to the student verifying these requirements have been met.

If students in this program are seeking a licensure, certificate or registration through the Department of Health, please refer to 456.0635, F.S. for more information on disqualification for a license, certificate, or registration through the Department of Health.

The Core should be taken first in the program. Following the successful completion of the core, the student is eligible to take the National Health Care Foundation Skill Standards Assessment with instructor approval and the completion of a portfolio.

Career and Technical Student Organization (CTSO)

CTSOs are co-curricular career and technical student organizations providing leadership training and reinforcing specific career and technical skills. Career and Technical Student Organizations provide activities for students as an integral part of the instruction offered. Other CTSOs not listed in this curriculum framework or recognized by the Florida Department of Education are permissible provided they support student mastery over the standards and benchmarks of this curriculum framework.

Cooperative Training – OJT

On-the-job training is appropriate but not required for this program. Whenever offered, the rules, guidelines, and requirements specified in the OJT framework apply.

Basic Skills

In Career Certificate programs offered for 450 hours or more, in accordance with Rule 6A-10.040, F.A.C., the minimum basic skills grade levels required for postsecondary adult career and technical students to complete this program are: Computation (Mathematics) and Communications (Reading and Language Arts). These grade level numbers correspond to a grade equivalent score obtained on a state-designated basic skills examination.

Adult students with disabilities, as defined in Section 1004.02, Florida Statutes, may be exempted from meeting the Basic Skills requirements (Rule 6A-10.040). Students served in exceptional student education (except gifted) as defined in s. 1003.01, F.S., may also be exempted from meeting the Basic Skills requirement. Each school district and Florida College System Institution must adopt a policy addressing procedures for exempting eligible students with disabilities from the Basic Skills requirement as permitted in Section 1004.91, F.S.

Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology, and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

Note: postsecondary curriculum and regulated secondary programs cannot be modified.

Florida Department of Education
Curriculum Framework

The standards and benchmarks for this program were updated for the 2026-27 academic year.

Program Title: **Pharmacy Technician**
Program Type: **Career Preparatory**
Career Cluster: **Health Science**

Career Certificate Program		
Program Number	H170500	
CIP Number	0351080506	
Grade Level	30, 31	
Program Length	1050 hours	
Teacher Certification	Refer to the **Program Structure** section.	
CTSO	HOSA, SkillsUSA	
SOC Codes (all applicable)	For program SOC codes, please see the Program and Course Tables section of the CTE Program Resources page linked below.	
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml	
Basic Skills Level	Computation (Mathematics): 11	Communications (Reading and Language Arts): 10

Purpose

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Health Science career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of Health Science career cluster. The program is designed to prepare students for employment as pharmacy technicians.

This program focuses on broad, transferable skills and stresses understanding and demonstration of the following elements of the health care industry: planning, management, finance, technical and production skills, underlying principles of technology, labor issues, community issues, and health, safety, and environmental issues.

The content includes but is not limited to metric system, medical terminology, medicinal drugs, pharmaceutical compounding, USP 795 standards, sterile techniques, USP 797 and USP 800 standards, maintenance of inventory, IV preparation, receiving and handling of hazardous materials, preparing purchase orders, receiving and checking supplies purchased, printing labels, typing prescription labels, delivering medications, pricing

prescription drug orders and supplies, prepackaging unit dose packages, patient record systems, control records, data processing automation in pharmacy, computer application, employability skills, leadership and human relations skills, health and safety, including CPR.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Program Structure

This program is a planned sequence of instruction consisting of 2 occupational completion points.

This program is comprised of courses which have been assigned course numbers in the SCNS (Statewide Course Numbering System) in accordance with Section 1007.24 (1), F.S. Career and Technical credit shall be awarded to the student on a transcript in accordance with Section 1001.44(3) (b), F.S.

To teach the courses listed below, instructors must hold at least one of the teacher certifications indicated for that course.

The following table illustrates the postsecondary program structure:

OCP	Course Number	Course Title	Teacher Certification	Length
A	HSC0003	Basic Healthcare Worker	PHARMACY 7G	90 hours
B	PTN0084	Pharmacy Technician 1		360 hours
	PTN0085	Pharmacy Technician 2		300 hours
	PTN0086	Pharmacy Technician 3		300 hours

Regulated Programs

This program is regulated by the Department of Health, Florida Board of Pharmacy.

This program must be approved by the Board of Pharmacy. Program completers who wish to work as Pharmacy Technicians in the State of Florida must register with the Board of Pharmacy (465.014, F.S.).

Florida's Career Readiness Skills for CTE Programs

Employability Skills	
01.0	Apply academic skills to workplace scenarios.
01.01	Use reading skills.
01.02	Use writing skills.
01.03	Use mathematical strategies and procedures.
01.04	Use scientific principles and procedures.
02.0	Design a solution to an industry problem.
02.01	Use critical thinking.
02.02	Use creativity.
02.03	Make sound decisions.
02.04	Solve problems.
02.05	Reason.
02.06	Plan and organize.
03.0	Manage resources within an industry project
03.01	Manage time.
03.02	Manage money or resources.
03.03	Manage materials.
03.04	Manage personnel.
04.0	Oversee the subcomponents, operations and output of a technical or organizational system.
04.01	Manage systems.
04.02	Monitor systems.
04.03	Improve systems.
05.0	Use information for decision making.
05.01	Locate information.
05.02	Organize information.
05.03	Use information.

	05.04 Analyze information.
	05.05 Communicate information.
06.0	Apply relevant technology to workplace scenarios to aid productivity.
	06.01 Use technology.
07.0	Interpret and express interpersonal communication.
	07.01 Communicate verbally.
	07.02 Listen actively.
	07.03 Comprehend written material.
	07.04 Convey information in writing.
	07.05 Communicate nonverbally.
	07.06 Interpret nonverbal communication.
08.0	Interact with others to accomplish workplace goals.
	08.01 Collaborate with others in a team.
	08.02 Respond to customer needs.
	08.03 Exercise leadership.
	08.04 Negotiate to resolve conflict.
	08.05 Respect others.
09.0	Manage personal behavior to maximize productivity and professional growth.
	09.01 Demonstrate responsibility and self-discipline.
	09.02 Adapt and show flexibility.
	09.03 Work independently.
	09.04 Demonstrate a willingness to learn.
	09.05 Demonstrate integrity.
	09.06 Demonstrate professionalism.
	09.07 Take initiative.
	09.08 Display positive attitude.
	09.09 Take responsibility for professional growth.

Job Attainment	
10.0	Find, assess and apply to job opportunities.
10.01	Identify online job posts relevant to his or her career aspirations.
10.02	Compare and contrast the job posts' required qualifications, job duties, compensation, benefits and employers.
10.03	Define what information, documentation and writing prompts are required for the positions.
11.0	Communicate personal competence, character and fit for a job opportunity.
11.01	Develop a resume.
11.02	Write a cover letter.
11.03	Curate a professional portfolio that includes work products.
11.04	Prepare for and experience a mock job interview.
12.0	Cultivate and leverage relationships to professionally advance.
12.01	Request a signed reference letter, letter of recommendation and/or an online skill/professionalism endorsement.
12.02	Develop a plan to cultivate a professional digital footprint.
12.03	Develop a networking plan for a specific industry of interest.

Standards

After successfully completing this program, the student will be able to perform the following:

01.0 Demonstrate knowledge of the healthcare delivery system and health occupations.
02.0 Demonstrate the ability to communicate and use interpersonal skills effectively.
03.0 Demonstrate legal and ethical responsibilities.
04.0 Demonstrate an understanding of and apply wellness and disease concepts.
05.0 Recognize and practice safety and security procedures.
06.0 Recognize and respond to emergency situations.
07.0 Recognize and practice infection control procedures.
08.0 Demonstrate an understanding of information technology applications in healthcare.
09.0 Demonstrate employability skills.
10.0 Demonstrate knowledge of blood-borne diseases, including HIV/AIDS.
11.0 Apply basic math and science skills.
12.0 Practice professional pharmacy relational skills.
13.0 Identify medical and legal considerations in various pharmacy settings.
14.0 Perform clerical duties as related to Pharmacy Practice.
15.0 Demonstrate knowledge of medication safety and prevention of medication errors.
16.0 Demonstrate knowledge of inventory management.
17.0 Initiate measurement and calculating techniques as they relate to United States Pharmacopeia (USP) 795 (non-sterile) compounding in pharmacy practice.
18.0 Demonstrate basic knowledge and skills in areas of anatomy/ physiology, pharmacology, and drug classification relevant to pharmacy technicians.
19.0 Prepare and deliver medications.
20.0 Repackage unit-dose medications.
21.0 Prepare United States Pharmacopeia (USP) 797 and USP 800 sterile products.

Florida Department of Education
Student Performance Standards

Program Title: **Pharmacy Technician**
Career Certificate Program Number: **H170500**

The **Basic Health Care Worker (HSC0003)** is referred to as the **Health Science Core** and is the first OCP in the majority of the Career Certificate Program health science programs. Secondary and Postsecondary students completing the health science core will not have to repeat the core in any other health science program in which it is a part. When the recommended sequence is followed, the structure allows students to complete at specified points for employment or remain for advanced training or cross-training.

Course Number: HSC0003
Occupational Completion Point: A
Basic Healthcare Worker – 90 Hours

To ensure consistency whenever these courses are offered, the health science core standards (1-11) and benchmarks have been placed in a separate document. To access this document, visit this link:
https://www.fldoe.org/file/20894/health-sci-core-psav-cc-2627.rtf

Course Number: PTN0084
Occupational Completion Point: B
Pharmacy Technician 1 – 360 Hours

12.0	Practice professional pharmacy relational skills. The student will be able to:
12.01	Explore the meaning, organizational flow, and duties of pharmacy personnel.
12.02	Identify pharmacy organizations and their role in the profession, to include student membership opportunities.
12.03	Identify the current trends and perspectives in the pharmacy practice.
12.04	Describe how team building can facilitate change within the pharmacy working environment.
12.05	Understand the importance of good interpersonal skills/soft skills in various pharmacy settings.
12.06	Explain ethical conduct in job-related activities.
12.07	Identify State of Florida requirements for obtaining and maintaining pharmacy technician registration, as well as continuing education requirements for renewal.
12.08	Explore the importance of national certification and the continuing education requirements for renewal.
13.0	Identify medical and legal considerations in various pharmacy settings. The student will be able to:

13.01	Articulate the significance of current national and Florida law, medical legal concepts, and administrative rules as they relate to the scope of practice for the pharmacy technician.
13.02	Demonstrate an understanding of current vaccines and their guidelines.
13.03	Convey an understanding of patient counseling requirements pertaining to OBRA-90 versus Medication Therapy Management (MTM).
13.04	Explain the legal requirements for accurate pharmacy documentation and recordkeeping.
13.05	Demonstrate an understanding of HIPAA in pharmacy practice pertaining to the ethical and legal considerations.
13.06	Convey an understanding of pertinent laws governing pharmacy practice, including but not limited to prescriptions, drug diversion, and use of E-FORCSE PDMP requirements.
13.07	Differentiate between controlled substance schedules (CI-CV) and their applicable regulations.
13.08	Convey an understanding of the Florida Right to Know Act with respect to P-listed drugs in addition to hazardous materials, the utilization of safety data sheets, and hazardous communication symbols.
13.09	Understand and explain activities that may be performed by pharmacy technicians and those that must be performed by licensed pharmacists, including final check.
13.10	Explain the importance of technology and its current use in various pharmacy settings.
13.11	Utilize emerging technologies such as AI to cross-reference reports with dispense/administration history to address unaccounted medications.
14.0	Perform clerical duties as related to Pharmacy Practice. The student will be able to:
14.01	Utilize pharmaceutical medical terminology.
14.02	Identify the major symbols and abbreviations used on prescriptions and state the meaning.
14.03	Utilize pharmacy reference manuals or websites.
14.04	Demonstrate retail pharmacy dispensing processes.
14.05	Utilize pharmacy software in processing pharmacy prescription data.
14.06	Identify and discuss applications of E-Prescribing and facsimile.
14.07	Utilize and apply interactive communication skills while gathering accurate information from patients and other healthcare professionals.
14.08	Create, complete, and maintain patient profiles, including third-party billing information.
14.09	Understand the processes of PBMs and third-party billing, resolving rejections, and obtaining prior authorizations.
14.10	Demonstrate professional communication skills within the scope of practice for the pharmacy technician.

	14.11 Demonstrate knowledge of systems used in maintaining pharmacy records.
15.0	Demonstrate knowledge of medication safety and prevention of medication errors. The student will be able to:
	15.01 Identify communication modalities that can result in the transmission of inaccurate information and explain specific ways to make improvements.
	15.02 Convey an understanding of the patient's Bill of Rights for medication administration as it relates to pharmacy practice.
	15.03 Identify and explain appropriate patient safety goals by applicable accrediting and regulatory organizations.
	15.04 Identify potential errors that may result in quality-related events (QRE) and explain specific ways they can be prevented.
	15.05 Describe safety strategies used to prevent medication errors due to pharmaceutical abbreviations and terminology.
	15.06 Summarize, evaluate, and describe the technician's role in quality assurance activities as related to various pharmacy practices.
16.0	Demonstrate knowledge of inventory management. The student will be able to:
	16.01 Convey an understanding of industry standards in purchasing pharmaceutical supplies.
	16.02 Demonstrate how to maintain a controlled substance inventory.
	16.03 Understand pharmacy business math in prescription pricing systems.
	16.04 Maintain stock inventory, communicate shortages, and seek solutions to maintain continuity of patient care.
	16.05 Understand the process of how to create electronic purchase orders.
	16.06 Accurately perform the process of purchasing, receiving, special handling, storing, distributing, and disposing of pharmaceutical supplies.
	16.07 Convey an understanding of recall management and know the differences between types of recalls and how to address them.
	16.08 Convey an understanding of the inventory control process implemented by Title II of the Drug Quality and Security Act.
17.0	Initiate measurement and calculating techniques as they relate to United States Pharmacopeia (USP) 795 (non-sterile) compounding in pharmacy practice. The student will be able to:
	17.01 Convey an understanding of United States Pharmacopeia (USP) 795 standards.
	17.02 Convert measurements within the apothecary, avoirdupois, household, and metric systems.
	17.03 Perform common pharmaceutical calculations.
	17.04 Identify and utilize common pharmaceutical weighing equipment.

17.05	Identify and utilize common pharmaceutical volume measurement equipment.
17.06	Accurately demonstrate the technique of preparing common non-sterile pharmaceutical compounds.
17.07	Summarize, evaluate, and describe the technician's role in quality assurance activities as related to the preparation of non-sterile products.

Course Number: PTN0085 Occupational Completion Point: B Pharmacy Technician 2 – 300 Hours	
18.0	Demonstrate basic knowledge and skills in areas of anatomy/ physiology, pharmacology, and drug classification relevant to pharmacy technicians. The student will be able to:
18.01	Evaluate and apply anatomical terminology to describe the location of parts or areas of the body and related disease processes.
18.02	Define the major classifications of pharmaceuticals and conditions treated.
18.03	Demonstrate knowledge of trade and generic name equivalents.
18.04	Evaluate the pharmacy technician's understanding of pharmacology, including drug classifications, mechanisms of action, common side effects, and interactions.
18.05	Identify at least one official compendium of standards for quality and purity of drug monographs.
18.06	Convey an understanding of Investigational Drugs, Risk Evaluation and Mitigation Strategies (REMS), off-label indications, and emerging drug therapy.
18.07	Demonstrate an understanding of common adult doses of medications, duration of common drug therapies, and respective contraindications, including the BEERS Criteria.
18.08	Identify potential interactions that require a pharmacist's intervention pertaining to food/alcohol, herbal, OTC, and/or prescription medications.
18.09	Identify allergy histories during the medication reconciliation process and discern "allergy" vs "side effect" in optimizing care.
19.0	Prepare and deliver medications. The student will be able to:
19.01	Read and prepare medication orders correctly.
19.02	Demonstrate institutional pharmacy dispensing processes.
19.03	Compare all new orders with medications listed on profiles while noting any changes.
19.04	Utilize special precautions in the preparation of medications for pediatric patients.
19.05	Explain how to safely transport medications, being aware of hazards, theft, legal implications of accidental loss, and other consequences.

19.06	Understand how to correctly fill and deliver medication.
19.07	Collect data from the medication administration record.
19.08	Describe the use of automated medication dispensing equipment.

Course Number: PTN0086 Occupational Completion Point: B Pharmacy Technician 3 – 300-Hours	
20.0	Repackage unit-dose medications. The student will be able to:
20.01	Locate the correct stock container.
20.02	Describe the use of unit-dose packaging equipment.
20.03	Measure, count, and place the individual dose in appropriate containers.
20.04	Understand precautions used when packaging unit-dose hazardous drugs.
20.05	Record repackaged medication data correctly.
20.06	Summarize, evaluate, and describe the technician's role in quality assurance activities as related to repackaging unit-dose medication.
21.0	Prepare United States Pharmacopeia (USP) 797 and USP 800 sterile products. The student will be able to:
21.01	Convey an understanding of United States Pharmacopeia (USP) 797 regulations.
21.02	Convey an understanding of United States Pharmacopeia (USP) 800 regulations.
21.03	Compare the medication order with the label on the vial and check the expiration date of the product.
21.04	Calculate drug dosage for parenteral use.
21.05	Reconstitute parenteral medications.
21.06	Demonstrate aseptic technique to withdraw medication from stock vial, measure correct quantity as instructed, select and insert it into IV solution without error.
21.07	Demonstrate aseptic technique to withdraw medication from an ampule using a filter needle/straw.
21.08	Prepare parenteral solutions using proper aseptic technique.
21.09	Understand the preparation of Total Parenteral Nutrition (TPN) solutions.

21.10	Understand the preparation of chemotherapeutic agents using proper safety techniques.
21.11	Understand the appropriate technique while using specialized equipment such as laminar flow hoods, filters, pumps, automated compounders, and barrier isolators.
21.12	Place label on IV solution container and record appropriately.
21.13	Perform a quality control check of the completed product.
21.14	Convey an understanding of the proper storage and disposal requirements of reconstituted and non-reconstituted IV solutions.
21.15	Convey an understanding of the proper storage and disposal of hazardous drugs.
21.16	Summarize, evaluate, and describe the technician's role in quality assurance activities related to the preparation of sterile products.
21.17	Understand the concept of Diversion Surveillance to assist in recognizing controlled substances.

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools, and equipment, as well as experimental, quality, and safety procedures, are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate, and troubleshoot equipment/tools used to make observations. Students understand measurement error and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

Clinical practicum experiences are an integral part of this program.

Special Notes

Due to the clinical experiences students are engaged in through the program, and to ensure the safety of both the students and the patients, the recommended student-to-instructor ratio in the classroom is 20:1 and in the lab is 4:1.

This program meets the Department of Health's education requirements for HIV/AIDS, Domestic Violence, and Prevention of Medical Errors. Although not a requirement for initial licensure, it is a requirement for renewal, therefore, the instructor **may** provide a certificate for renewal purposes to the student, verifying these requirements have been met.

If students in this program are seeking a licensure, certificate, or registration through the Department of Health, please refer to 456.0635, F.S., for more information on disqualification for a license, certificate, or registration through the Department of Health.

It is recommended that program completers take the national pharmacy technician certification exam offered by the Pharmacy Technician Certification Board, 2215 Constitution Ave. NW, Washington, DC 20037-2985, (202) 429-7576. This certification is offered all year round continually.

The Core should be taken first in the program. Following the successful completion of the core, the student is eligible to take the National Health Care Foundation Skill Standards Assessment with instructor approval and the completion of a portfolio.

Career and Technical Student Organization (CTSO)

CTSOs are co-curricular career and technical student organizations providing leadership training and reinforcing specific career and technical skills. Career and Technical Student Organizations provide activities for students as an integral part of the instruction offered. Other CTSOs not listed in this curriculum framework or recognized by the Florida Department of Education are permissible provided they support student mastery over the standards and benchmarks of this curriculum framework.

Cooperative Training – OJT

On-the-job training is appropriate but not required for this program. Whenever offered, the rules, guidelines, and requirements specified in the OJT framework apply.

Basic Skills

In Career Certificate programs offered for 450 hours or more, in accordance with Rule 6A-10.040, F.A.C., the minimum basic skills grade levels required for postsecondary adult career and technical students to complete this program are: Computation (Mathematics) and Communications (Reading and Language Arts). These grade level numbers correspond to a grade equivalent score obtained on a state designated basic skills examination.

Adult students with disabilities, as defined in Section 1004.02, Florida Statutes, may be exempted from meeting the Basic Skills requirements (Rule 6A-10.040). Students served in exceptional student education (except gifted) as defined in s. 1003.01, F.S., may also be exempted from meeting the Basic Skills requirement. Each school district and Florida College System Institution must adopt a policy addressing procedures for exempting eligible students with disabilities from the Basic Skills requirement as permitted in Section 1004.91, F.S.

Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology, and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

Note: postsecondary curriculum and regulated secondary programs cannot be modified.

Florida Department of Education
Curriculum Framework

No new students may be enrolled in this program starting 2026-27. The last year to report any enrollment is 2028-29. This program was replaced by Medical Assisting H700300 (0351080105).

Program Title: **Medical Assisting**
Program Type: **Career Preparatory**
Career Cluster: **Health Science**

Career Certificate Program		
Program Number	H170515	
CIP Number	0351080102	
Grade Level	30, 31	
Program Length	1300 hours	
Teacher Certification	Refer to the **Program Structure** section.	
CTSO	HOSA	
SOC Codes (all applicable)	For program SOC codes, please see the Program and Course Tables section of the CTE Program Resources page linked below.	
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml	
Basic Skills Level	Computation (Mathematics): 10	Communications (Reading and Language Arts): 10

Purpose

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Health Science career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of Health Science career cluster.

This program is designed to prepare students for employment as medical assistants.

The content includes but is not limited to communication, transcultural communication in healthcare, interpersonal skills, legal and ethical responsibilities, health-illness concepts, administrative and clinical duties, emergency procedures including CPR and first aid, emergency preparedness, safety and security procedures, medical terminology, anatomy and physiology, and employability skills.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Program Structure

This program is a planned sequence of instruction consisting of 5 occupational completion points.

This program is comprised of courses which have been assigned course numbers in the SCNS (Statewide Course Numbering System) in accordance with Section 1007.24 (1), F.S. Career and Technical credit shall be awarded to the student on a transcript in accordance with Section 1001.44(3) (b), F.S.

To teach the courses listed below, instructors must hold at least one of the teacher certifications indicated for that course.

The following table illustrates the postsecondary program structure:

OCP	Course Number	Course Title	Teacher Certification	Length
A	HSC0003	Basic Healthcare Worker	MED ASST 7G LPN 7G LAB TECH @7 7G REG NURSE 7 G PRAC NURSE @7 %7%G (Must be a Registered Nurse)	90 hours
B	MEA0002	Introduction to Medical Assisting	MED ASST 7G LPN 7G LAB TECH @7 7G REG NURSE 7 G BUS ED 1@2 SECRETAR 7 G CLERICAL @7 7G PRAC NURSE @7 %7%G (Must be a Registered Nurse)	250 hours
	MEA0501	Medical Office Procedures		75 hours
C	MEA0521	Phlebotomist, MA	MED ASST 7G LPN 7G LAB TECH @7 7G REG NURSE 7 G PHLEB 7G PRAC NURSE @7 %7%G (Must be a Registered Nurse)	75 hours

OCP	Course Number	Course Title	Teacher Certification	Length
D	MEA0543	EKG Aide, MA	MED ASST 7G LPN 7G LAB TECH @7 7G REG NURSE 7 G PHLEB 7G PRAC NURSE @7 %7%G (Must be a Registered Nurse	75 hours
E	MEA0581	Clinical Assisting		230 hours
	MEA0530	Pharmacology for Medical Assisting		90 hours
	MEA0573	Laboratory Procedures		125 hours
	MEA0506	Administrative Office Procedures		90 hours
	MEA0942	Practicum Experience		200 Hours

Florida's Career Readiness Skills for CTE Programs

Employability Skills	
01.0	Apply academic skills to workplace scenarios.
01.01	Use reading skills.
01.02	Use writing skills.
01.03	Use mathematical strategies and procedures.
01.04	Use scientific principles and procedures.
02.0	Design a solution to an industry problem.
02.01	Use critical thinking.
02.02	Use creativity.
02.03	Make sound decisions.
02.04	Solve problems.
02.05	Reason.
02.06	Plan and organize.
03.0	Manage resources within an industry project
03.01	Manage time.
03.02	Manage money or resources.
03.03	Manage materials.
03.04	Manage personnel.
04.0	Oversee the subcomponents, operations and output of a technical or organizational system.
04.01	Manage systems.
04.02	Monitor systems.
04.03	Improve systems.
05.0	Use information for decision making.
05.01	Locate information.
05.02	Organize information.
05.03	Use information.

	05.04 Analyze information.
	05.05 Communicate information.
06.0	Apply relevant technology to workplace scenarios to aid productivity.
	06.01 Use technology.
07.0	Interpret and express interpersonal communication.
	07.01 Communicate verbally.
	07.02 Listen actively.
	07.03 Comprehend written material.
	07.04 Convey information in writing.
	07.05 Communicate nonverbally.
	07.06 Interpret nonverbal communication.
08.0	Interact with others to accomplish workplace goals.
	08.01 Collaborate with others in a team.
	08.02 Respond to customer needs.
	08.03 Exercise leadership.
	08.04 Negotiate to resolve conflict.
	08.05 Respect others.
09.0	Manage personal behavior to maximize productivity and professional growth.
	09.01 Demonstrate responsibility and self-discipline.
	09.02 Adapt and show flexibility.
	09.03 Work independently.
	09.04 Demonstrate a willingness to learn.
	09.05 Demonstrate integrity.
	09.06 Demonstrate professionalism.
	09.07 Take initiative.
	09.08 Display positive attitude.
	09.09 Take responsibility for professional growth.

Job Attainment	
10.0	Find, assess and apply to job opportunities.
10.01	Identify online job posts relevant to his or her career aspirations.
10.02	Compare and contrast the job posts' required qualifications, job duties, compensation, benefits and employers.
10.03	Define what information, documentation and writing prompts are required for the positions.
11.0	Communicate personal competence, character and fit for a job opportunity.
11.01	Develop a resume.
11.02	Write a cover letter.
11.03	Curate a professional portfolio that includes work products.
11.04	Prepare for and experience a mock job interview.
12.0	Cultivate and leverage relationships to professionally advance.
12.01	Request a signed reference letter, letter of recommendation and/or an online skill/professionalism endorsement.
12.02	Develop a plan to cultivate a professional digital footprint.
12.03	Develop a networking plan for a specific industry of interest.

Standards

After successfully completing this program, the student will be able to perform the following:

01.0 Demonstrate knowledge of the healthcare delivery system and health occupations.
02.0 Demonstrate the ability to communicate and use interpersonal skills effectively.
03.0 Demonstrate legal and ethical responsibilities.
04.0 Demonstrate an understanding of and apply wellness and disease concepts.
05.0 Recognize and practice safety and security procedures.
06.0 Recognize and respond to emergency situations.
07.0 Recognize and practice infection control procedures.
08.0 Demonstrate an understanding of information technology applications in healthcare.
09.0 Demonstrate employability skills.
10.0 Demonstrate knowledge of blood borne diseases, including HIV/AIDS.
11.0 Apply basic math and science skills.
12.0 Demonstrate proper use of medical terminology.
13.0 Demonstrate knowledge of legal and ethical responsibilities for medical assistants.
14.0 Demonstrate an understanding of anatomy and physiology concepts in both illness and wellness states.
15.0 Demonstrate basic clerical/medical office duties.
16.0 Demonstrate accepted professional, communication, and interpersonal skills as related to phlebotomy.
17.0 Discuss phlebotomy in relation to the health care setting.
18.0 Identify the anatomic structure and function of body systems in relation to services performed by a phlebotomist.
19.0 Recognize and identify collection reagents supplies, equipment and interfering chemical substances.
20.0 Demonstrate skills and knowledge necessary to perform phlebotomy.
21.0 Practice infection control following standard precautions.
22.0 Practice accepted procedures of transporting, accessioning and processing specimens.
23.0 Practice quality assurance and safety.
24.0 Describe the role of a medical assistant with intravenous therapy in oncology and dialysis.
25.0 Describe the cardiovascular system.
26.0 Identify legal and ethical responsibilities of an EKG aide.
27.0 Perform patient care techniques in the health care facility.
28.0 Demonstrate knowledge of, apply and use medical instrumentation modalities.
29.0 Demonstrate basic office examination procedures.
30.0 Demonstrate knowledge of the fundamentals of microbial control and use aseptic techniques.
31.0 Demonstrate minor treatments.
32.0 Demonstrate knowledge of basic diagnostic medical assisting procedures.
33.0 Demonstrate basic radiology procedures.
34.0 Demonstrate knowledge of pharmaceutical principles and administer medications.
35.0 Perform CLIA-waived diagnostic clinical laboratory procedures.
36.0 Demonstrate knowledge of emergency preparedness and protective practices.

37.0 Perform administrative office duties.
38.0 Perform administrative and general skills.
39.0 Perform clinical and general skills.
40.0 Display professional work habits integral to medical assisting.

Florida Department of Education
Student Performance Standards

Program Title: **Medical Assisting**
Career Certificate Program Number: **H170515**

The **Basic Health Care Worker (HSC0003)** is referred to as the **Health Science Core** and is the first OCP in the majority of the Career Certificate Program health science programs. Secondary and Postsecondary students completing the health science core will not have to repeat the core in any other health science program in which it is a part. When the recommended sequence is followed, the structure allows students to complete at specified points for employment or remain for advanced training or cross-training.

Course Number: HSC0003
Occupational Completion Point: A
Basic Healthcare Worker – 90 Hours

To ensure consistency whenever these courses are offered, the health science core standards (1-11) and benchmarks have been placed in a separate document. To access this document, visit this link:
https://www.fldoe.org/file/20894/health-sci-core-psav-cc-2627.rtf

Course Number: MEA0002
Occupational Completion Point: B
Introduction to Medical Assisting – 250 Hours

12.0	Demonstrate proper use of medical terminology. The student will be able to:
12.01	Use medical terminology as appropriate for a medical assistant.
12.02	Identify medical terms labeling the word parts.
12.03	Define medical terms and abbreviations related to all body systems.
13.0	Demonstrate knowledge of legal and ethical responsibilities for medical assistants. The student will be able to:
13.01	Describe the role of the medical assistant.
13.02	Understand the importance of order entry as it relates to certification of the medical assistant.
13.03	Provide health care as set forth in 458.3485, Florida Statute (F.S.) for the medical assistant.
13.04	Distinguish between the liability of the physicians and staff members in the medical office.
13.05	Explain the principles for preventing medical liability.

	13.06 List the principles in the Codes of Ethics for Medical Assistants as stated by the American Association of Medical Assistants.
14.0	Demonstrate an understanding of anatomy and physiology concepts in both illness and wellness states. The student will be able to:
	14.01 Define the terms Anatomy and Physiology
	14.02 Define both medical terms and abbreviations related to all body systems.
	14.03 Define the principle directional terms, planes, quadrants and cavities used in describing the body and the association of body parts to one another.
	14.04 Define the levels of organization of the body inclusive of, but not limited to, cells, organs and body systems.
	14.05 Describe the function of the 11 major organ systems of the body (1) Integumentary, (2) skeletal, (3) muscular, (4) Nervous, (5) endocrine, (6) circulatory (cardiovascular) (7) lymphatic, (8) respiratory, (9) digestive, (10) urinary, and (11) reproductive.
	14.06 Describe symptoms and common disease pathology related to each body system and the relationship of the disease process to other body systems.
	14.07 Discuss diagnostic options to identify common disease pathology and corresponding basic treatment.
	14.08 Compare structure and function of the body across the life span.

Course Number: MEA0501 Occupational Completion Point: B Medical Office Procedures – 75 Hours	
15.0	Demonstrate basic clerical/medical office duties. The student will be able to:
	15.01 Perform effective communication skills essential to the medical office.
	15.02 Maintain filing systems.
	15.03 Operate office equipment and perform clerical office procedures.
	15.04 Discuss principles of using electronic health record (EHR).
	15.05 Prepare and maintain medical records both manually and within the electronic health record (EHR).
	15.06 Screen and process mail.
	15.07 Schedule routine appointments and patient admissions and/or procedures both manually and within the electronic health record (EHR).
	15.08 Adhere to current government regulations, risk management and compliance within the scope of practice of a medical assistant practicing in the State of Florida.

15.09	Maintain office inventory.
15.10	Inform patients of office policies both verbally and written.
15.11	Perform general housekeeping duties.
15.12	Perform daily office activities both manually and within the electronic health record (EHR).
15.13	Receive patients and visitors.
15.14	Identify and maintain office security policies/procedures.

Course Number: MEA0521 Occupational Completion Point: C Phlebotomist, MA – 75 Hours	
16.0	Demonstrate accepted professional, communication, and interpersonal skills as related to phlebotomy. The student will be able to:
16.01	Demonstrate the appropriate professional behavior of a phlebotomist.
16.02	Explain to the patient the procedure to be used in specimen collection.
16.03	Explain in detail the importance of identifying patients correctly when drawing blood.
16.04	Describe the scope of practice for a phlebotomist.
16.05	List and describe professional organizations that provide accreditation, certification, and licensure to phlebotomists and phlebotomy programs.
16.06	Explain the importance of continuing education in relation to certification to maintain competency and skills.
17.0	Discuss phlebotomy in relation to the health care setting. The student will be able to:
17.01	List, classify and discuss various departments and services within the health care setting with which the phlebotomist must interact to obtain laboratory specimens from patients.
17.02	Identify the major departments/sections within the clinical laboratory, the major types of procedures run in each department/section, and their specimen requirements.
17.03	Describe roles of the major classifications of clinical laboratory personnel (i.e., pathologist, chief/administrative technologist, CLS, MLS, MLT, MT, phlebotomist, lab assistant, etc.).
18.0	Identify the anatomic structure and function of body systems in relation to services performed by a phlebotomist. The student will be able to:
18.01	Describe and define major body systems with emphasis on the circulatory system.

	18.02 List and describe the main superficial veins used in performing venipuncture.
	18.03 Locate the most appropriate site(s) for both capillary and venipuncture.
	18.04 Describe the function of the following blood components: erythrocytes, thrombocytes, leukocytes and plasma.
	18.05 Compare and contrast between serum and plasma as it relates to blood collection.
	18.06 Discuss hemostasis as it relates to blood collection.
19.0	Recognize and identify collection reagents supplies, equipment and interfering chemical substances. The student will be able to:
	19.01 Identify and discuss proper use of appropriate types of equipment needed to collect various clinical laboratory blood specimens by venipuncture.
	19.02 Explain the special precautions and types of equipment needed to collect blood from a pediatric patient.
	19.03 Identify and discuss proper use of supplies used in collecting short-draw specimens or difficult draws.
	19.04 Identify and discuss the proper use of the various types of anticoagulants, preservatives and gels used in blood collection and the vacuum tube color-codes for these additives.
	19.05 Describe the types of specimens that are analyzed in the clinical laboratory and the phlebotomist's role in collecting and/or transporting these specimens to the laboratory.
	19.06 Describe substances potentially encountered during phlebotomy which can interfere in analysis of blood constituents.
	19.07 Define and utilize correct medical terminology and metric measurement needed for specimen collection.
20.0	Demonstrate skills and knowledge necessary to perform phlebotomy. The student will be able to:
	20.01 Follow approved procedure for completing a laboratory requisition form.
	20.02 Recognize a properly completed requisition.
	20.03 Demonstrate knowledge of established protocol for patient and specimen identification.
	20.04 Discuss appropriate methods for facilitating and preparing the patient for capillary and venipuncture collection.
	20.05 List appropriate antiseptic agents useful in preparing sites for capillary and venipuncture.
	20.06 Perform venipuncture by evacuated tube, butterfly, and syringe systems, demonstrating appropriate use of supplies, proper handling of equipment and specimens, and appropriate patient care.
	20.07 Describe the correct order of draw.
	20.08 Describe the use of barcoding systems used for specimen collection.

	20.09 Perform a capillary puncture using appropriate supplies and techniques for both adults and pediatric patients.
	20.10 Describe the most common complications associated with capillary and venipuncture, their causes, prevention and treatment.
	20.11 Recognize and respond to possible adverse patient reactions such as allergies, convulsions, syncope, light headedness, vomiting, and nerve involvement.
	20.12 Perform appropriate procedures for disposing of used or contaminated capillary and venipuncture supplies.
	20.13 Perform appropriate techniques for making a peripheral blood smear for hematologic evaluation.
	20.14 Demonstrate the proper procedure for collecting blood cultures.
	20.15 Discuss the effects of hemolysis and methods of prevention.
	20.16 Demonstrate a working understanding of how age and weight of patients impacts the maximum amount of blood that can be safely drawn.
21.0	Practice infection control following standard precautions. The student will be able to:
	21.01 Define the term hospital acquired infection.
	21.02 Describe and practice procedures for infection prevention including hand washing skills.
	21.03 Discuss transmission-based precautions.
	21.04 Identify potential routes of infection and their complications.
22.0	Practice accepted procedures of transporting, accessioning and processing specimens. The student will be able to:
	22.01 Demonstrate good laboratory practice for preparation and processing (e.g., centrifugation, separation, aliquoting, labeling, and storage) of serum, plasma, urine, sputum, stool, and wound culture specimens.
	22.02 Demonstrate knowledge of accessioning procedures.
	22.03 Describe the significance of time constraints for specimen collection and delivery.
	22.04 Describe routine procedures for transporting and processing specimens including DOT packaging requirements.
	22.05 Follow protocol for accepting verbal test orders and explain procedure for obtaining signature or other form of authentication of verbal orders.
23.0	Practice quality assurance and safety. The student will be able to:
	23.01 Distinguish and perform procedures which ensure reliability of test results when collecting blood specimens.
	23.02 Practice appropriate patient safety.

	23.03 Practice safety in accordance with OSHA (state & federal guidelines) for chemical, biological, and PPE established procedures including proper disposal of sharps and biohazardous materials.
	23.04 Follow documentation procedures for work related accidents.
	23.05 Implement appropriate Joint Commission patient safety goals and other accrediting/regulatory agency guidelines.
24.0	Describe the role of a medical assistant with intravenous therapy in oncology and dialysis. The student will be able to:
	24.01 Outline the principles of intravenous therapy.
	24.02 Understand intravenous terminology, practices, and equipment.
	24.03 Describe the dangers of intravenous treatment.
	24.04 Describe the role of the medical assistant in assisting with intravenous therapy.

Course Number: MEA0543 **Occupational Completion Point: D** **EKG Aide, MA – 75 Hours**	
25.0	Describe the cardiovascular system. The student will be able to:
	25.01 Locate the heart and surrounding structures.
	25.02 Diagram and label the parts of the heart and list the functions of each labeled part.
	25.03 Trace the flow of blood through the cardiopulmonary system.
26.0	Identify legal and ethical responsibilities of an EKG aide. The student will be able to:
	26.01 Recognize and practice legal and ethical responsibilities as they relate to an EKG aide.
	26.02 Maintain a safe and efficient work environment.
	26.03 Maintain EKG equipment so it will be safe and accurate.
27.0	Perform patient care techniques in the health care facility. The student will be able to:
	27.01 Describe the physical preparation of the patient for EKG testing.
	27.02 Identify patient and verify the requisition order.
	27.03 Prepare patient for EKG testing.

	27.04 State precautions required when performing an EKG.
28.0	Demonstrate knowledge of, apply and use medical instrumentation modalities. The student will be able to:
	28.01 Calibrate and maintain EKG equipment in the work environment.
	28.02 Identify three types of lead systems (standard/limb, augmented, and precordial/chest).
	28.03 State Einthoven's triangle.
	28.04 Demonstrate proper lead placement including lead placement with special consideration for various patients with special needs.
	28.05 Demonstrate knowledge of the application of a Holter Monitor and provide patient education of its use.
	28.06 Identify artifacts and mechanical problems.
	28.07 Perform a 12 lead EKG.
	28.08 Perform a rhythm strip.
	28.09 Recognize normal sinus rhythm.
	28.10 Report any dysrhythmias that are not normal sinus rhythm.
	28.11 Recognize a cardiac emergency as seen on the EKG.
	28.12 Use documentation skills to identify electrocardiographs.

Course Number: MEA0581 **Occupational Completion Point: E** **Clinical Assisting – 230 Hours**	
29.0	Demonstrate basic office examination procedures. The student will be able to:
	29.01 Prepare patients for and assist the physician with physical examinations including, but not limited to, pre and post-natal, male and female reproductive, rectal, and pediatric.
	29.02 Measure and record vital signs, recognizing abnormalities and danger signs.
	29.03 Measure and record a pulse pressure
	29.04 Measure and record an apical pulse.
	29.05 Measure and record a orthostatic blood pressure

	29.06 Record patient data.
	29.07 Instruct patient on breast and testicular self-examinations.
	29.08 Assist with pediatric procedures, including, but not limited to, weighing, measuring, and collecting specimens.
	29.09 Instruct patients regarding health care and wellness practices including but not limited to dietary guidelines necessary for common diseases.
	29.10 Create a patient teaching plan which addresses dietary guidelines and special needs.
	29.11 Explore and utilize the U.S. Department of Agricultures “My Plate” Food Guide (https://www.myplate.gov/).
	29.12 Prepare patients for diagnostic procedures.
30.0	Demonstrate knowledge of the fundamentals of microbial control and use aseptic techniques. The student will be able to:
	30.01 Demonstrate competence in sanitation, disinfection, and sterilization.
	30.02 Identify common instruments.
	30.03 Sterilize and maintain instruments and supplies.
	30.04 Sanitize instruments.
	30.05 Wrap articles for autoclave.
	30.06 Sterilize articles in autoclave.
	30.07 Chemically disinfect articles.
	30.08 Practice infection control and contamination prevention.
	30.09 Safely handle contaminated equipment and supplies.
	30.10 Create and maintain sterile fields for dressings and minor surgery.
	30.11 Prepare for minor surgical procedures including surgical hand wash and applying sterile gloves.
	30.12 Remove sutures and staples.
	30.13 Correctly dispose of contaminated materials.
31.0	Demonstrate minor treatments. The student will be able to:
	31.01 Perform minor treatments as directed by the physician including hot and cold therapy, (which includes, but is not limited to the

	following: hot water bag, heating pad, hot soaks and compresses, ice bag, cold compresses and packs).
31.02	Assist the physician with examination, treatment, and/or minor surgery.
31.03	Organize examination and treatment areas before, during, and after patient care.
31.04	Perform orthopedic procedures, including but not limited to the following: crutch measurements and instruction in use of canes, crutches, walkers, and wheelchairs.
31.05	Demonstrate the knowledge of casting procedures and supplies.
31.06	Apply all types of roller bandages using turns as appropriate.
31.07	Perform eye irrigations and instillations.
31.08	Perform ear irrigations and instillations.
32.0	Demonstrate knowledge of basic diagnostic medical assisting procedures. The student will be able to:
32.01	Perform visual and auditory screening.
32.02	Perform spirometry.
32.03	Perform oximetry.
32.04	Assist in the performance of a pap and pelvic exam.
33.0	Demonstrate basic radiologic procedures. The student will be able to:
33.01	Describe the basic operation of radiology equipment and accessories.
33.02	Describe how to maintain x-ray film files.
33.03	Describe computed and digital radiography systems.
33.04	Educate patients in preparation for radiological exams.
33.05	Demonstrate knowledge of ultrasound treatment.

Course Number: MEA0530 **Occupational Completion Point: E** **Pharmacology for Medical Assisting – 90 Hours**	
34.0	Demonstrate knowledge of pharmaceutical principles and administer medications. The student will be able to:

34.01	Identify commonly administered drugs, their uses, and effects.
34.02	Identify the major classifications of medications for each body system including, indications for use, side effects, and adverse reactions.
34.03	Use correct pharmaceutical abbreviations and terminology.
34.04	Identify various methods and routes of drug administration.
34.05	Instruct patients regarding self-administration of medications.
34.06	Calculate dosage and administer pharmaceuticals to correct anatomical sites, to correct patient, by correct route of administration, at the correct time, and document correctly.
34.07	Demonstrate knowledge of the legal and ethical standards related to the administration and the dispensing of drugs in the office setting under the doctor's supervision.
34.08	Demonstrate knowledge of emergency medications for first aid.
34.09	Identify the dangers and complications associated with drug administration
34.10	Recognize and report medication errors.
34.11	Demonstrate appropriate techniques to: • Prepare and administer non-parenteral medications (solid, liquids, and inhalers). • Prepare and administer parenteral medications. • Reconstitute powdered drugs. • Prepare injections from ampules and vials. • Apply the Seven Rights of Drug Administration

Course Number: MEA0573 **Occupational Completion Point: E** **Laboratory Procedures – 125 Hours**	
35.0	Perform CLIA-waived diagnostic clinical laboratory procedures. - The students will be able to:
35.01	Comply with safety signs, symbols, and labels.
35.02	Recognize signs and symptoms that may indicate to the physician a need for laboratory testing.
35.03	Describe the criteria used by Food and Drug Administration (FDA) to classify a test as “CLIA waived” and the regulatory constraints on test performance.
35.04	Explain the methods of quality control for CLIA-waived testing, identify acceptable and unacceptable control results, and describe specific corrective action required when results are unacceptable.
35.05	Demonstrate proper technique for the collection of urine, capillary whole blood (finger/heel stick), culture material (throat/nasal

	swab) and other specimen types required for CLIA-waived tests.
35.06	Instruct patients in the proper collection of urine (clean catch, mid-stream), sputum, and stool specimens.
35.07	Perform CLIA-waived occult blood tests.
35.08	Perform CLIA-waived urinalysis testing including color and turbidity assessment and reagent test strips.
35.09	Perform CLIA-waived hematology tests (e.g., hemoglobin, hematocrit).
35.10	Perform CLIA-waived chemistry tests (e.g., glucose, cholesterol).
35.11	Perform CLIA-waived pregnancy tests.
35.12	Perform CLIA-waived infectious disease testing (e.g., strep screen, mono test, influenza A/B).
36.0	Demonstrate knowledge of emergency preparedness and protective practices. The student will be able to:
36.01	Maintain and operate emergency equipment and supplies.
36.02	Participate in a mock environmental exposure event and document steps taken.
36.03	Explain an evacuation plan for a physician's office.
36.04	Maintain a current list of community resources for emergency preparedness.

Course Number: MEA0506 **Occupational Completion Point: E** **Administrative Office Procedures – 90 Hours**	
37.0	Perform administrative office duties. The student will be able to:
37.01	Execute data management using Electronic Health Record (EHR) including, but not limited to, patient registration, appointment scheduling, charting, billing and insurance processing, procedure and diagnostic coding, ordering and monitoring patient testing, medication and prescription orders, keyboarding and correspondence, and performing an office inventory.
37.02	Execute non EHR data management including, but not limited to, selecting appropriate procedure and diagnostic codes, process insurance data and claims, develop and maintain billing and collection systems.
37.03	Perform various financial procedures, including, but not limited to, billing and collection procedures, payroll procedures, and checkbook procedures.
37.04	Demonstrate knowledge of management in a medical office including but not limited to personnel records, interviewing, various management styles, risk management, and conflict resolution.

Course Number: MEA0942
Occupational Completion Point: E
Practicum Experience – 200 Hours

This "Practicum" experience is a supervised, unpaid activity of **a total of 200 hours** of which 160 contact hours must be in an ambulatory health care setting and no more than 40 hours in a simulated laboratory setting performing administrative and clinical procedures and must be completed prior to graduation. Students ready for the Practicum experience have completed all other program requirements and are eligible for this final phase in the program.

The program should ensure that the experience and instruction of students are meaningful and parallel in content and concept with the material presented in lecture and laboratory sessions. Sites should be selected so that each student is afforded a variety of experiences, while at the same time all students are provided consistent learning opportunities.

This experience provides an opportunity for students to utilize both administrative and clinical skills learned in the Medical Assistant classroom and clinical environment in a local clinic, physician's office, or other health care facility.

The students Practicum should be performed in a professional environment under conditions of strict supervision and guidance of a licensed physician and clinical coordinator. An individual who has knowledge of the medical assisting profession must provide on-site supervision of the student. When performed in the stimulated laboratory all activities must be under the supervision of the medical assisting program/practicum coordinator or faculty. The content for any simulated laboratory activity will be at the discretion of each individual learning institution to best meet the need of its students.

The actual hands-on experiences will tie-in all the educational components based on theory and competency-based instruction that the student learned in the laboratory and classroom setting.

This course is set to assess the student in their ability to utilize all critical thinking applications learned during the program and to apply these critical thinking skills during the Practicum experience. The healthcare facility and the learning college/institute will expect the student to utilize good work ethics, show excellent civic responsibilities, and further learn to both embrace and respect cultural diversity.

38.0	Perform administrative and general skills. The student will be able to:
38.01	Understand proper and professional telephone technique.
38.02	Recognize and respond to verbal communication.
38.03	Recognize and respond to non-verbal communication.
38.04	Maintain confidentiality and adhere to HIPAA regulations.
38.05	Understand how to document manually and electronically appropriately.
38.06	Understand how to schedule appointments manually and electronically accurately.

	38.07 Understand how to schedule inpatient and/or outpatient procedures accurately.
	38.08 Greet patients courteously and professionally.
	38.09 Demonstrate safety and quality assurance in the workplace.
39.0	Perform clinical and general skills. The student will be able to:
	39.01 Demonstrate aseptic hand washing technique.
	39.02 Dispose of bio-hazardous waste in appropriate containers.
	39.03 Adhere to sterilization techniques according to standards.
	39.04 Practice standard precautions.
	39.05 Stage patients and obtain vital signs.
	39.06 Obtain patient histories.
	39.07 Prepare and maintain examination and treatment area(s).
	39.08 Prepare patient for examinations and/or minor office procedures.
	39.09 Assist with examinations and/or minor office procedures.
	39.10 Provide and document patient education.
40.0	Display professional work habits integral to medical assisting. The student will be able to:
	40.01 Communicate appropriately in healthcare settings by listening, writing, speaking and presenting with professional demeanor.
	40.02 Collaborate, communicate and interact professionally with other healthcare professionals utilizing technology.
	40.03 Contribute to team efforts by fulfilling responsibilities and valuing diversity.
	40.04 Exercise proper judgment and critical thinking skills in decision making.
	40.05 Adapt to changing organizational environments with flexibility.
	40.06 Report as expected, on time, appropriately dressed and groomed and ready to work.
	40.07 Model acceptable work habits as defined by company policy.
	40.08 Complete and follow through on tasks using time management skills and take initiative as warranted.

40.09 Respond appropriately and quickly to patient’s needs and concerns.
40.10 Practice etiquette and social sensitivity in face to face interaction, on the telephone and the Internet.
40.11 Actively adhere to policies and procedures that protect the patient’s confidentiality and privacy.
40.12 Understand resources related to patients’ healthcare needs.

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as, experimental, quality, and safety procedures are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate and troubleshoot equipment/tools used to make observations. Students understand measurement error; and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

Special Notes

Although it is not required, it is strongly recommended that the programs meet the Standards and Guidelines of an Accredited Educational Program for the Medical Assistant adopted by the American Association of Medical Assistants and the Commission on Accreditation of Allied Health Education Programs (CAAHEP) or the American Medical Technologist and the Accrediting Bureau of Health Education Schools (ABHES).
For further information contact:

Commission on Accreditation of Allied Health Education Programs (CAAHEP) www.caahep.org/
1361 Park Street, Clearwater, FL 33756, Phone: 727-210-2350/ Fax: 727-210-2354

Accrediting Bureau of Health Education Schools (ABHES) www.abhes.org/
777 Leesburg Pike, Suite 312, North Falls, VA 22043, (703) 917-9503

This program will also be in accordance with Florida Statute Medical Assistants, 458.3485, F.S.

This program meets the Department of Health's education requirements for HIV/AIDS, Domestic Violence and Prevention of Medical Errors. Although not a requirement for initial licensure, it is a requirement for renewal, therefore the instructor **may** provide a certificate for renewal purposes to the student verifying these requirements have been met.

If students in this program are seeking a licensure, certificate or registration through the Department of Health, please refer to 456.0635, F.S. for more information on disqualification for a license, certificate, or registration through the Department of Health.

Program completers of a CAAHEP or ABHES accredited program are eligible to take the American Association of Medical Assistants' Certification Examination (CMA) or the American Medical Technologists' Certification Examination (RMA). For further information contact:

American Association of Medical Assistants (AAMA) www.aama-ntl.org/
20 North Wacker Drive, Suite 1575, Chicago, Illinois 60606 (312-899-1500)
Or
American Medical Technologist (AMT) https://americanmedtech.org/
10700 West Higgins Road, Suite 150, Rosemont, Illinois 60018 (800-275-1268)

The Core should be taken first in the program. Following the successful completion of the core, the student is eligible to take the National Health Care Foundation Skill Standards Assessment with instructor approval and the completion of a portfolio.

Career and Technical Student Organization (CTSO)

CTSOs are co-curricular career and technical student organizations providing leadership training and reinforcing specific career and technical skills. Career and Technical Student Organizations provide activities for students as an integral part of the instruction offered. Other CTSOs not listed in this curriculum framework or recognized by the Florida Department of Education are permissible provided they support student mastery over the standards and benchmarks of this curriculum framework.

Cooperative Training – OJT

On-the-job training is appropriate but not required for this program. Whenever offered, the rules, guidelines, and requirements specified in the OJT framework apply.

Basic Skills

In Career Certificate programs offered for 450 hours or more, in accordance with Rule 6A-10.040, F.A.C., the minimum basic skills grade levels required for postsecondary adult career and technical students to complete this program are: Computation (Mathematics) and Communications (Reading and Language Arts). These grade level numbers correspond to a grade equivalent score obtained on a state designated basic skills examination.

Adult students with disabilities, as defined in Section 1004.02, Florida Statutes, may be exempted from meeting the Basic Skills requirements (Rule 6A-10.040). Students served in exceptional student education (except gifted) as defined in s. 1003.01, F.S., may also be exempted from meeting the Basic Skills requirement. Each school district and Florida College System Institution must adopt a policy addressing procedures for exempting eligible students with disabilities from the Basic Skills requirement as permitted in Section 1004.91, F.S.

Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

Note: postsecondary curriculum and regulated secondary programs cannot be modified.

Florida Department of Education
Curriculum Framework

Program Title: **Medical Coder/Biller**
Program Type: **Career Preparatory**
Career Cluster: **Health Science**

Career Certificate Program		
Program Number	H170529	
CIP Number	0351071403	
Grade Level	30, 31	
Program Length	1110 hours	
Teacher Certification	Refer to the **Program Structure** section.	
CTSO	HOSA	
SOC Codes (all applicable)	For program SOC codes, please see the Program and Course Tables section of the CTE Program Resources page linked below.	
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml	
Basic Skills Level	Computation (Mathematics): 9	Communications (Reading and Language Arts): 11

Purpose

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Health Science career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of Health Science career cluster. The program is designed to prepare students for employment in a variety of health care settings as entry level coder, medical record coder, coding technicians, or coding clerks, or medical coder/biller (Medical Records and Health Information Technicians).

The content includes but is not limited to medical terminology, anatomy and physiology, coding systems, fundamentals of disease process including pharmacology, health care delivery systems, basics of medical records services, ethical and legal responsibilities, safety/security procedures, basic data processing, and employability skills.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Program Structure

This program is a planned sequence of instruction consisting of 2 occupational completion points.

This program is comprised of courses which have been assigned course numbers in the SCNS (Statewide Course Numbering System) in accordance with Section 1007.24 (1), F.S. Career and Technical credit shall be awarded to the student on a transcript in accordance with Section 1001.44(3) (b), F.S.

To teach the courses listed below, instructors must hold at least one of the teacher certifications indicated for that course.

The following table illustrates the postsecondary program structure:

OCP	Course Number	Course Title	Teacher Certification	Length
A	HIM0009	Introduction to Health Information Technology	CER COD SP 7 G MED RECTEC 7G MED ASST 7G MED TRANS 7G	90 hours
	HIM0091	Medical Coder/Biller I		350 hours
	HIM0092	Medical Coder/Biller II		350 hours
B	HIM0093	Medical Coder/Biller III		320 hours

Florida's Career Readiness Skills for CTE Programs

Employability Skills	
01.0	Apply academic skills to workplace scenarios.
01.01	Use reading skills.
01.02	Use writing skills.
01.03	Use mathematical strategies and procedures.
01.04	Use scientific principles and procedures.
02.0	Design a solution to an industry problem.
02.01	Use critical thinking.
02.02	Use creativity.
02.03	Make sound decisions.
02.04	Solve problems.
02.05	Reason.
02.06	Plan and organize.
03.0	Manage resources within an industry project
03.01	Manage time.
03.02	Manage money or resources.
03.03	Manage materials.
03.04	Manage personnel.
04.0	Oversee the subcomponents, operations and output of a technical or organizational system.
04.01	Manage systems.
04.02	Monitor systems.
04.03	Improve systems.
05.0	Use information for decision making.
05.01	Locate information.
05.02	Organize information.
05.03	Use information.

	05.04 Analyze information.
	05.05 Communicate information.
06.0	Apply relevant technology to workplace scenarios to aid productivity.
	06.01 Use technology.
07.0	Interpret and express interpersonal communication.
	07.01 Communicate verbally.
	07.02 Listen actively.
	07.03 Comprehend written material.
	07.04 Convey information in writing.
	07.05 Communicate nonverbally.
	07.06 Interpret nonverbal communication.
08.0	Interact with others to accomplish workplace goals.
	08.01 Collaborate with others in a team.
	08.02 Respond to customer needs.
	08.03 Exercise leadership.
	08.04 Negotiate to resolve conflict.
	08.05 Respect others.
09.0	Manage personal behavior to maximize productivity and professional growth.
	09.01 Demonstrate responsibility and self-discipline.
	09.02 Adapt and show flexibility.
	09.03 Work independently.
	09.04 Demonstrate a willingness to learn.
	09.05 Demonstrate integrity.
	09.06 Demonstrate professionalism.
	09.07 Take initiative.
	09.08 Display positive attitude.
	09.09 Take responsibility for professional growth.

Job Attainment	
10.0	Find, assess and apply to job opportunities.
10.01	Identify online job posts relevant to his or her career aspirations.
10.02	Compare and contrast the job posts' required qualifications, job duties, compensation, benefits and employers.
10.03	Define what information, documentation and writing prompts are required for the positions.
11.0	Communicate personal competence, character and fit for a job opportunity.
11.01	Develop a resume.
11.02	Write a cover letter.
11.03	Curate a professional portfolio that includes work products.
11.04	Prepare for and experience a mock job interview.
12.0	Cultivate and leverage relationships to professionally advance.
12.01	Request a signed reference letter, letter of recommendation and/or an online skill/professionalism endorsement.
12.02	Develop a plan to cultivate a professional digital footprint.
12.03	Develop a networking plan for a specific industry of interest.

Standards

After successfully completing this program, the student will be able to perform the following:

01.0 Demonstrate an understanding of healthcare organizations and health occupations.
02.0 Demonstrate the ability to communicate and use interpersonal skills effectively.
03.0 Explore health informatics as health professional.
04.0 Apply Knowledge of health data concepts.
05.0 Manage the adoption of multiple formats of health records and the function of digital applications.
06.0 Apply Health Information Technology Principles.
07.0 Apply classification systems, clinical vocabularies and terminologies.
08.0 Evaluate ethical issues in Health Information professions.
09.0 Demonstrate compliance with laws, regulations, and standards that impact healthcare.
10.0 Apply policies, regulations, and standards to the management of information associated with treatment, payment, and operations (TPO).
11.0 Demonstrate computer knowledge and skills.
12.0 Demonstrate employability skills.
13.0 Describe the anatomy and physiology of the human body.
14.0 Demonstrate proficiency in the application of medical terminology.
15.0 Demonstrate an understanding of the fundamentals of disease processes in relation to the human body, including pharmacology.
16.0 Demonstrate proficiency in current medical code set systems and technology-assisted coding solutions.
17.0 Demonstrate proficiency in complex coding scenarios and value-based care requirements.
18.0 Articulate health information services within modern healthcare delivery systems related to the medical coder/biller.
19.0 Ensure professional and ethical behavior of a medical coder/biller in an evolving digital healthcare environment.
20.0 Participate in healthcare revenue cycle management processes.

Florida Department of Education
Student Performance Standards

Program Title: **Medical Coder/Biller**
Career Certificate Program Number: **H170529**

Course Number: HIM0009 **Occupational Completion Point: A** **Introduction to Health Information Technology – 90 Hours**	
01.0	Demonstrate an understanding of healthcare organizations and health occupations. The student will be able to:
01.01	Discuss the evolution of healthcare.
01.02	Demonstrate an understanding of the infrastructure of healthcare in the United States.
01.03	Discuss healthcare regulatory agencies and organizations.
01.04	Recognize levels of education, credentialing requirements, employment opportunities, workplace environments, and career growth potential.
01.05	Differentiate the roles of various providers and disciplines throughout the continuum of healthcare and respond to their information needs.
02.0	Demonstrate the ability to communicate and use interpersonal skills effectively. The student will be able to:
02.01	Apply basic speaking and active listening skills with meaningful feedback.
02.02	Identify characteristics of successful and unsuccessful communication including barriers
02.03	Demonstrate emotional intelligence (e.g., recognize verbal and non-verbal cues).
02.04	Demonstrate effective professional communication using correct spelling, grammar, formatting, and confidentiality.
02.05	Use appropriate medical terminology and abbreviations.
02.06	Promote health information training and awareness to internal/external stakeholders.
02.07	Model communication skills to varied levels of understanding and cultural orientation including generational differences, cultural, socioeconomic, ethnic, and religious groups.
02.08	Distinguish between subjective and objective information.
03.0	Explore health informatics as health profession. The student will be able to:
03.01	Discuss the past, present, and future of health information.

	03.02 Examine professional opportunities related to health information.
	03.03 Demonstrate knowledge of industry-recognized credentials and professional associations applicable to the field of health information.
04.0	Apply knowledge of health data concepts. The student will be able to:
	04.01 Examine various health data uses and data sets.
	04.02 Identify various characteristics of health data quality and emerging standards.
05.0	Manage the adoption of multiple formats of health records and the function of digital applications. The student will be able to:
	05.01 Apply regulations and requirements of health information to the continuum of care.
	05.02 Analyze health information as it relates to treatment, payment, and operations (TPO).
06.0	Apply Health Information Technology- principles. The student will be able to:
	06.01 Explain how changing regulations and technology impact the health information field.
	06.02 Validate the accuracy, integrity, and reliability of information from health information systems and applications in healthcare.
	06.03 Demonstrate proficiency and understanding of creation, use, storage, retrieval, and exchange of health data.
07.0	Apply classification systems, clinical vocabularies and terminologies. The student will be able to:
	07.01 Demonstrate the use of classification systems, clinical vocabularies, terminologies and nomenclatures.
08.0	Evaluate ethical issues in Health Information professions. The student will be able to:
	08.01 Interpret the industry-recognized code of ethics for healthcare information practices.
	08.02 Analyze ethical issues related to health information.
	08.03 Manage ethical issues related to treatment, payment, and operations.
09.0	Demonstrate compliance with laws, regulations, and standards that impact healthcare. The student will be able to:
	09.01 Advocate the importance of maintaining ethical and legal standards in gathering, managing, and analyzing health information.
	09.02 Identify all regulations, laws and standards that impact health information including the Health Insurance Portability and Accountability Act (HIPAA).
	09.03 Explain the composition of the legal health record.

	09.04 Apply health information policies and procedures for privacy, confidentiality, and security.
	09.05 Articulate legal terms and processes that impact healthcare.
10.0	Apply policies, regulations, and standards to the management of information associated with treatment, payment, and operations (TPO). The student will be able to:
	10.01 Describe how regulatory change impacts workflow.
	10.02 Demonstrate knowledge of policies and procedures for access and disclosure of protected health information to authorized users.
	10.03 Adhere to appropriate and applicable accrediting agency guidelines.
11.0	Demonstrate computer knowledge and skills. The student will be able to:
	11.01 Demonstrate the ability to create, manage, organize, attach, and retrieve files.
	11.02 Demonstrate the ability to connect to and perform research using search engines and by identifying reputable websites.
	11.03 Demonstrate proficiency in word processing, spreadsheets, and presentation software.
	11.04 Demonstrate the ability to manage software programs.
	11.05 Demonstrate knowledge of safe computer practices and security procedures such as encryption, passwords and biometrics.
12.0	Demonstrate employability skills. The student will be able to:
	12.01 Identify and exemplify professional traits desirable in a member of the healthcare team.
	12.02 Demonstrate professional standards of healthcare workers as they apply to hygiene, dress, language, and behavior (e.g., telephone and email etiquette, social media, courtesy and self-introductions).
	12.03 Identify necessary documentation that may be required when applying for a healthcare position.
	12.04 Model the process to obtain employment, including, but not limited to, job search, cover letter, resume, application, interview, and thank you letter.
Course Number: HIM0091 Occupational Completion Point: B Medical Coder/Biller I – 350 Hours	
13.0	Describe the anatomy and physiology of the human body. The student will be able to:
	13.01 Describe the structure and function of the respiratory system.
	13.02 Describe the structure and function of the circulatory system.

	13.03 Describe the structure and function of the musculoskeletal and connective tissue systems.
	13.04 Describe the structure and function of nervous and sensory systems.
	13.05 Describe the structure and function of the reproductive system.
	13.06 Describe the structure and function of the urinary system.
	13.07 Describe the structure and function of the digestive system.
	13.08 Describe the structure and function of the endocrine system.
	13.09 Describe the structure and function of the integumentary system.
	13.10 Describe major psychiatric disorders.
14.0	Demonstrate proficiency in the application of medical terminology. The student will be able to:
	14.01 Identify word parts of medical terminology in daily use.
	14.02 Build, spell and pronounce correctly, appropriate terms from word parts and be able to define the word.
	14.03 Identify word parts and be able to build, spell, and understand new words with those parts.
	14.04 Spell and use medical abbreviations.
	14.05 Identify terminology specific to healthcare settings including surgical, medical, and therapeutic.
	14.06 Apply medical reference sources.
15.0	Demonstrate an understanding of the fundamentals of disease processes in relation to the human body, including pharmacology. The student will be able to:
	15.01 Demonstrate an understanding of the predisposing factors and direct causes of disease as they relate to the human body.
	15.02 Demonstrate an understanding of the general pathogenesis and morphology of disease and its role in the disease process.
	15.03 Demonstrate an understanding of pharmacological agents, uses, treatments, and utilize drug reference sources.
	15.04 Identify and use diagnostic test terminology.

Course Number: HIM0092
Occupational Completion Point: B
Medical Coder/Biller II – 350 Hours

16.0	Demonstrate proficiency in current medical code set systems and technology-assisted coding solutions. The student will be able to:
16.01	Apply coding conventions and guidelines when utilizing Computer-Assisted Coding (CAC) and Natural Language Processing (NLP) technologies.
16.02	Implement processes for maintaining and updating coding resources, including automated updates and coding software maintenance.
16.03	Validate codes using both manual and automated systems, including diagnosis, procedure, HCPCS level II codes, APCs, and applicable modifiers and groupings according to current official guidelines.
16.04	Perform coding using current versions of ICD-10-CM, ICD-PCS, CPT, and HCPCS Level II in both traditional and virtual healthcare settings, including telehealth services.
16.05	Analyze the impact of Social Determinants of Health (SDoH) coding on revenue cycle management and in Clinical Documentation Integrity (CDI) programs using modern technology solutions.
16.06	Evaluate documentation compliance using automated auditing tools and Artificial Intelligence (AI)-assisted documentation improvement systems.
17.0	Demonstrate proficiency in complex coding scenarios and value-based care requirements. The student will be able to:
17.01	Apply coding concepts to complex cases, including post-acute care and virtual health encounters.
17.02	Utilize advanced analytics tools to assess case-mix index, hierarchical condition categories (HCCs), risk adjustment, and quality metrics for value-based reimbursement.
17.03	Analyze cases across the contemporary healthcare continuum, including remote patient monitoring and digital health services.
17.04	Apply various classification systems, including ICD-O, DSM, ICF, and emerging code sets for precision medicine and genomics.
18.0	Articulate health information services within modern healthcare delivery systems related to the medical /coder/biller. The student will be able to:
18.01	Collaborate with interdisciplinary teams in various departments through digital communication platforms and shared health information systems.
18.02	Utilize electronic health records (EHRs) and other digital health information systems content in various settings.
18.03	Educate stakeholders on regulatory compliance, including information blocking rules, interoperability requirements, and privacy regulations.
Course Number: HIM0093 Occupational Completion Point: B Medical Coder/Biller III – 320 Hours	
19.0	Ensure professional and ethical behavior of a medical coder/biller in an evolving digital healthcare environment. The student will be able to:
19.01	Advocate for the role of the Medical Coder/Biller in data analytics and population health management.

	19.02 Adhere to ethical coding practices in AI and automated coding systems.
20.0	Participate in healthcare revenue cycle management processes. The student will be able to:
	20.01 Prepare claims using electronic claims submission systems and automated verification tools.
	20.02 Analyze various payment methodologies (e.g., value-based and alternative payment models).
	20.03 Utilize modern accounting software and patient financial engagement platforms.
	20.04 Apply reimbursement methodologies for emerging healthcare delivery models, including telehealth and remote patient monitoring in various settings.
	20.05 Maintain digital charge capture system and management tools in various settings.
	20.06 Implement compliance strategies for regulatory requirements (e.g., price transparency and surprise billing regulations).

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as, experimental, quality, and safety procedures are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate and troubleshoot equipment/tools used to make observations. Students understand measurement error; and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

Special Notes

Students should be encouraged to become members and participate in the activities of the professional organizations: American Health Information Management Association and/or American Academy of Procedural Coders.

About AHIMA Credentials: Completers of the Medical Biller Coder program may take the Certified Coding Associate (CCA) credential exam as the first step in their coding career. The CCA is an entry-level credential that distinguishes new coders in the job market. Individuals with a CCA credential:

- Exhibit a level of commitment, competency, and professional capability usually absent in a newcomer to the field.
- Demonstrate a commitment to the coding profession.
- Distinguish themselves from non-credentialed coders and those holding credentials from other organizations less demanding of the higher level of expertise required to earn AHIMA certification.

The CCA should be viewed as the starting point for an individual entering a career as a coder. The AHIMA CCS and CCS-P exams demonstrate mastery level skills in coding. Most individuals challenge the CCS or CCS-P exams after two or more years of work experience in coding.
American Health Information Management Association (AHIMA), 919 North Michigan Ave., Suite 2150, Chicago, IL. 60611-5519, (312) 233-1100

The American Academy of Professional Coders (AAPC) sponsors a certification exam for coders with expertise in physician-based settings which leads to the title of Certified Professional Coder (CPC) or Certified Professional Coder Hospital (CPC-H).
American Academy of Professional Coders (AAPC), 309 West 700 South, Salt Lake City, UT 84101, 800-626-2633

Or

The National Healthcare Association also offers a national certification examination for a Certified Billing and Coding Specialist (CBCS).
National Healthcareer Association www.nhanow.com, 7500 West 160th Street, Stilwell, Kansas 66085, 800-499-9092

The Core should be taken first in the program. Following the successful completion of the core, the student is eligible to take the National Health Care Foundation Skill Standards Assessment with instructor approval and the completion of a portfolio.

Career and Technical Student Organization (CTSO)

CTSOs are co-curricular career and technical student organizations providing leadership training and reinforcing specific career and technical skills. Career and Technical Student Organizations provide activities for students as an integral part of the instruction offered. Other CTSOs not listed in this curriculum framework or recognized by the Florida Department of Education are permissible provided they support student mastery over the standards and benchmarks of this curriculum framework.

Cooperative Training – OJT

On-the-job training is appropriate but not required for this program. Whenever offered, the rules, guidelines, and requirements specified in the OJT framework apply.

Basic Skills

In Career Certificate programs offered for 450 hours or more, in accordance with Rule 6A-10.040, F.A.C., the minimum basic skills grade levels required for postsecondary adult career and technical students to complete this program are: Computation (Mathematics) and Communications (Reading and Language Arts). These grade level numbers correspond to a grade equivalent score obtained on a state designated basic skills examination.

Adult students with disabilities, as defined in Section 1004.02, Florida Statutes, may be exempted from meeting the Basic Skills requirements (Rule 6A-10.040). Students served in exceptional student education (except gifted) as defined in s. 1003.01, F.S., may also be exempted from meeting the Basic Skills requirement. Each school district and Florida College System Institution must adopt a policy addressing procedures for exempting eligible students with disabilities from the Basic Skills requirement as permitted in Section 1004.91, F.S.

Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

Note: postsecondary curriculum and regulated secondary programs cannot be modified.

Florida Department of Education
Curriculum Framework

The standards and benchmarks for this program were updated for the 2026-27 academic year.

Program Title: **Nursing Assistant (Long-Term Care)**
Program Type: **Career Preparatory**
Career Cluster: **Health Science**

Career Certificate Program	
Program Number	H170602
CIP Number	0351390200
Grade Level	30, 31
Program Length	120 hours
Teacher Certification	Refer to the **Program Structure** section.
CTSO	HOSA, SkillsUSA
SOC Codes (all applicable)	For program SOC codes, please see the Program and Course Tables section of the CTE Program Resources page linked below.
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml
Basic Skills Level	N/A

Purpose

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Health Science career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of Health Science career cluster. This program is designed to prepare students for employment as nursing assistants in long-term care facilities.

The content includes, but is not limited to, interpersonal skills, medical terminology, legal and ethical responsibilities, safe and efficient work, gerontology, nutrition, pet-facilitated therapy, health and safety, including Cardio-pulmonary Resuscitation (CPR) – heart saver level, and employability skills.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Program Structure

This program is a planned sequence of instruction consisting of 1 occupational completion point.

This program is comprised of courses which have been assigned course numbers in the SCNS (Statewide Course Numbering System) in accordance with Section 1007.24 (1), F.S. Career and Technical credit shall be awarded to the student on a transcript in accordance with Section 1001.44(3) (b), F.S.

To teach the courses listed below, instructors must hold at least one of the teacher certifications indicated for that course.

The following table illustrates the postsecondary program structure:

OCP	Course Number	Course Title	Teacher Certification	Length
A	PRN0090	Nursing Assistant (Long Term Care)	REG NURSE 7 G LPN 7 G* PRAC NURSE @7 %7%G (Must be a Registered Nurse)	120 hours

*** The LPN 7 G district issued certification is a practical nurse. A practical nurse can only be utilized as an instructor of the CNA training program when they are supervised by the program coordinator, which must be a registered nurse. Please refer to 64B9-15.005, F.A.C. for requirements.**

Regulated Programs

Successful completion of this program from an approved school prepares the student for certification for employment as a Nursing Assistant in a nursing home, in accordance with Chapter 464.203, F.S. To be approved, this program must be supervised by a registered nurse and have follow the faculty qualifications set forth in 64B9-15.005(3)(a), F.A.C.

New programs must be approved by the Board of Nursing, Department of Health prior to enrolling students.

Those students who satisfactorily complete an approved course are eligible to apply to take the national nursing assistant examination being utilized in Florida, in accordance with Chapter 464.203, F.S. This program includes both Acute and Long Term Care.

In accordance with 64B9-15.005(4)(c), F.A.C., students will perform nursing skills in the clinical and simulated laboratory settings under the supervision of a qualified instructor. The clinical instruction ratio for program instructor to student is 1 to 15 for students caring directly for residents or clients.

In accordance with 64B9-15.006(2), F.A.C., the standardized curriculum shall require a minimum of 80 hours of classroom and 40 hours of clinical instruction. The clinical instruction shall include at least 20 hours of long-term care clinical instruction in a licensed nursing home

In accordance with 64B9-15.006(3), F.A.C., Before any direct contact with a resident, a training program shall require that a student receive a minimum of 16 hours of classroom instruction in communication and interpersonal skills; infection control; safety/emergency procedures, including the Heimlich maneuver; promoting residents' independence; and respecting residents' rights.

According to Section 400.211, F.S., persons who are enrolled in, or have completed, a state-approved nursing assistant training program may be employed by a licensed nursing facility for four months. However, the certification requirements must be met within four months of such initial employment.

Florida's Career Readiness Skills for CTE Programs

Employability Skills	
01.0	Apply academic skills to workplace scenarios.
01.01	Use reading skills.
01.02	Use writing skills.
01.03	Use mathematical strategies and procedures.
01.04	Use scientific principles and procedures.
02.0	Design a solution to an industry problem.
02.01	Use critical thinking.
02.02	Use creativity.
02.03	Make sound decisions.
02.04	Solve problems.
02.05	Reason.
02.06	Plan and organize.
03.0	Manage resources within an industry project
03.01	Manage time.
03.02	Manage money or resources.
03.03	Manage materials.
03.04	Manage personnel.
04.0	Oversee the subcomponents, operations and output of a technical or organizational system.
04.01	Manage systems.
04.02	Monitor systems.
04.03	Improve systems.
05.0	Use information for decision making.
05.01	Locate information.
05.02	Organize information.
05.03	Use information.

	05.04 Analyze information.
	05.05 Communicate information.
06.0	Apply relevant technology to workplace scenarios to aid productivity.
	06.01 Use technology.
07.0	Interpret and express interpersonal communication.
	07.01 Communicate verbally.
	07.02 Listen actively.
	07.03 Comprehend written material.
	07.04 Convey information in writing.
	07.05 Communicate nonverbally.
	07.06 Interpret nonverbal communication.
08.0	Interact with others to accomplish workplace goals.
	08.01 Collaborate with others in a team.
	08.02 Respond to customer needs.
	08.03 Exercise leadership.
	08.04 Negotiate to resolve conflict.
	08.05 Respect others.
09.0	Manage personal behavior to maximize productivity and professional growth.
	09.01 Demonstrate responsibility and self-discipline.
	09.02 Adapt and show flexibility.
	09.03 Work independently.
	09.04 Demonstrate a willingness to learn.
	09.05 Demonstrate integrity.
	09.06 Demonstrate professionalism.
	09.07 Take initiative.
	09.08 Display positive attitude.
	09.09 Take responsibility for professional growth.

Job Attainment	
10.0	Find, assess and apply to job opportunities.
10.01	Identify online job posts relevant to his or her career aspirations.
10.02	Compare and contrast the job posts' required qualifications, job duties, compensation, benefits and employers.
10.03	Define what information, documentation and writing prompts are required for the positions.
11.0	Communicate personal competence, character and fit for a job opportunity.
11.01	Develop a resume.
11.02	Write a cover letter.
11.03	Curate a professional portfolio that includes work products.
11.04	Prepare for and experience a mock job interview.
12.0	Cultivate and leverage relationships to professionally advance.
12.01	Request a signed reference letter, letter of recommendation and/or an online skill/professionalism endorsement.
12.02	Develop a plan to cultivate a professional digital footprint.
12.03	Develop a networking plan for a specific industry of interest.

Standards

After successfully completing this program, the student will be able to perform the following:

01.0 Demonstrate mathematics and science knowledge and skills.
02.0 Demonstrate the ability to communicate and use interpersonal skills effectively.
03.0 Demonstrate legal and ethical responsibilities specific to the nurse assistant.
04.0 Use information technology tools.
05.0 Recognize and practice safety and security procedures.
06.0 Demonstrate employability skills.
07.0 Provide emergency care.
08.0 Describe the anatomy and physiology of the human body.
09.0 Perform physical comfort and safety functions specific to the nurse assistant.
10.0 Provide personal patient care.
11.0 Perform patient care procedures.
12.0 Apply principles of nutrition.
13.0 Provide care for geriatric patients.
14.0 Apply the principles of infection control specific to the nurse assistant.
15.0 Provide biological, psychological, and social support.
16.0 Perform organizational skills following the patient care plan.
17.0 Assist with restorative (rehabilitative) activities.
18.0 Demonstrate knowledge of blood-borne diseases, including HIV/AIDS.

Florida Department of Education
Student Performance Standards

Program Title: **Nursing Assistant (Long Term Care)**
Career Certificate Program Number: **H170602**

Course Number: PRN0090 **Occupational Completion Point: A** **Nursing Assistant –120 hours**	
01.0	Demonstrate mathematics and science knowledge and skills. The students will be able to:
01.01	Draw, read, and report on graphs, charts, and tables.
01.02	Measure time, temperature, distance, capacity, and mass/weight.
01.03	Make, use, and convert using both traditional and metric units.
01.04	Make estimations and approximations and judge the reasonableness of the result.
01.05	Convert from regular to 24-hour time.
01.06	Demonstrate ability to evaluate and draw conclusions.
01.07	Organize and communicate the results obtained by observation and experimentation.
01.08	Ask appropriate scientific questions and recognize what is involved in experimental approaches to the solution of such questions.
01.09	Calculate ratios.
02.0	Demonstrate the ability to communicate and use interpersonal skills effectively. The student will be able to:
02.01	Distinguish between factual reports and personal opinion.
02.02	Identify barriers to communication.
02.03	Use basic medical terminology and approved abbreviations.
02.04	Demonstrate effective interpersonal relationships.
02.05	Receive and give oral reports of a patient's status.
02.06	Report and record objective, pertinent observations, in written or oral form, observing legal guidelines.
02.07	Maintain current documentation.

	02.08 Obtain specified data from the patient and family.
	02.09 Utilize verbal and written information to assist with the patient's plan of care.
	02.10 Demonstrate use of the communication system.
	02.11 Adapt communication skills to varied levels of understanding and cultural orientation, including, but not limited to, diverse age, cultural, economic, ethnic, and religious groups.
	02.12 Read and discuss technical material.
03.0	Demonstrate legal and ethical responsibilities specific to the nurse assistant. The student will be able to:
	03.01 Discuss and demonstrate legal and ethical behavior within the nursing assistant’s scope of practice, including role limitations in Florida.
	03.02 Describe the purpose of the chain of communication to resolve conflict.
	03.03 Follow policies and procedures affecting the health, safety, and well-being of patients.
	03.04 Demonstrate safe standards of patient care, including prevention and quality of care.
	03.05 Exhibit behavior supporting and promoting patients’ and/or residents' rights.
	03.06 Recognize the potential for and prevention of medical errors and practice the proper procedures to follow regarding medical errors.
	03.07 Follow policies and procedures affecting the health, safety, and well-being of patients.
	03.08 Recognize and report signs of substance abuse.
	03.09 Demonstrate an understanding of vulnerable population abuse and reporting procedures per agency.
	03.10 Recognize that a CNA must self-report any crimes they’ve been involved in within 30 days of the offense in accordance with Florida Statues.
	03.11 Define Omnibus Budget Reconciliation Act (OBRA).
	03.12 Define Minimum Data Set (MDS).
	03.13 Identify and explain the standards of the Health Insurance Portability and Accountability Act (HIPAA).
04.0	Use information technology tools. The students will be able to:
	04.01 Employ computer operations applications to access, create, manage, integrate, and store information.
	04.02 Recognize new and emerging technology in healthcare.

05.0	Recognize and practice safety and security procedures. The students will be able to:
05.01	Recognize safe and unsafe working conditions and report safety hazards.
05.02	Demonstrate the safe use of medical equipment.
05.03	Explain and apply the theory of root- cause analysis.
05.04	Identify and describe methods in medical error reduction and prevention in the various healthcare settings.
05.05	Identify and practice security procedures for medical supplies and equipment.
05.06	Demonstrate personal safety procedures based on Occupational Safety and Health Administration (OSHA) and Centers for Disease Control (CDC) regulations (including standard precautions).
05.07	Recognize Materials Data Safety Sheets (MSDS) and comply with safety signs, symbols, and labels.
05.08	Demonstrate proper body mechanics and ergonomics.
05.09	Demonstrate the procedure for properly identifying patients.
05.10	Demonstrate procedures for the safe transport and transfer of patients.
05.11	Discuss the Joint Commission patient safety goals.
06.0	Demonstrate employability skills. The students will be able to:
06.01	Conduct a job search and secure information about a job.
06.02	Identify documents that may be required when applying for a job.
06.03	Complete a job application.
06.04	Demonstrate competence in job-interview techniques.
06.05	Identify or demonstrate appropriate responses to criticism from employer, supervisor, or other persons.
06.06	Demonstrate knowledge of how to make job changes appropriately.
06.07	Demonstrate acceptable employee health habits.
07.0	Provide emergency care. The student will be able to:
07.01	Obtain and maintain training or certification in cardiopulmonary resuscitation (CPR), automated external defibrillator (AED), foreign body airway obstruction (FBAO), and first aid for infant, child, and adult.

	07.02 Recognize fire, safety, disaster, and evacuation procedures.
08.0	Describe the anatomy and physiology of the human body. The student will be able to:
	08.01 Describe the basic structure and function of body systems.
	08.02 Describe the relationships of body systems in providing patient care.
	08.03 Recognize abnormal signs and symptoms of common diseases and conditions.
09.0	Perform physical comfort and safety functions specific to the nurse assistant. The student will be able to:
	09.01 Implement appropriate regulatory and accrediting agency patient safety guidelines.
	09.02 Maintain safe patient units, equipment, and a comfortable environment.
	09.03 Maintain service areas on the units, including supplies and equipment.
	09.04 Observe, report, and record changes in the patient's behavior as needed, including mental awareness.
	09.05 Demonstrate adjustment of bed and side rails according to facility policy.
	09.06 Demonstrate and assist the patient in dangling.
	09.07 Demonstrate lifting, supporting, and transferring patients from bed to chair, bed to bed, and bed to stretcher, including the use of the various assistive devices and equipment while utilizing proper body mechanics and patient safety measures.
	09.08 Demonstrate the proper use of a gait/transfer belt in both transfer and ambulation.
	09.09 Assist patient in ambulation, including the use of a crutch, cane, or walker.
	09.10 Demonstrate the proper wheelchair safety techniques and assist the patient as needed with use.
	09.11 Apply supportive devices as directed (e.g., footboard, over-bed cradle, alternating pressure mattress).
	09.12 Assist patient with care and use of prosthetic/orthotic devices.
	09.13 Describe emergency procedures utilized in the clinical area(s) and the role of the nurse assistant in these procedures.
10.0	Provide personal patient care. The student will be able to:
	10.01 Perform bed bath; observe and report changes in a patient, including skin and level of consciousness.
	10.02 Assist with shower or tub bath, including the use of specialty tubs or prepackaged disposable-bagged baths.
	10.03 Administer back rub with bath and as needed.

10.04	Assist patient with hair care utilizing sink, tub, shower, bed, or shower cap.
10.05	Demonstrate the use of a safety and/or electric razor to shave the patient.
10.06	Demonstrate how to groom a patient, including hair, skin, foot, hand, and nail care.
10.07	Assist with and/or administer oral hygiene, including denture care.
10.08	Assist the patient to dress.
10.09	Assist patient with toileting using various types of restorative and rehabilitative equipment.
10.10	Assist patient with use of bedpan (standard and fracture).
10.11	Assist with bowel and bladder training.
10.12	Assist and/ or provide perineal care.
10.13	Empty, measure, and record urinary output and/or drainage.
10.14	Demonstrate application and use of a leg bag, leg strap, and dignity bag.
10.15	Monitor and assist with the drainage of urostomy bags and colostomy bags.
10.16	Assist the patient with both donning and doffing the prosthesis and brace.
10.17	Assist patient with meals.
10.18	Describe the relationships of body systems when providing patient care.
10.19	Recognize abnormal signs and symptoms of common diseases and conditions when providing patient care.
11.0	Perform patient care procedures. The student will be able to:
11.01	Demonstrate ability to accurately measure, record, and report vital signs.
11.02	Demonstrate ability to recognize and report vital signs outside of normal parameters.
11.03	Assist with the admission, transfer, and discharge of a patient and/or resident.
11.04	Maintain patient belongings list.
11.05	Make an unoccupied and occupied bed.
11.06	Provide passive range-of-motion exercises.

11.07	Apply anti-embolic hose and sequential compression devices.
11.08	Understand and demonstrate proper collection of routine, timed urine, and clean catch urine specimens.
11.09	Record fluid intake and output (I&O).
11.10	Observe, record, and report the patient's emesis.
11.11	Monitor and provide urinary catheter care and drainage systems.
11.12	Assist with ostomy care, including emptying or changing ostomy bags that do not adhere to the skin.
11.13	Collect stool specimen.
11.14	Assist with the collection of a sputum specimen.
11.15	Assist the nurse with the care of the patient with complex medical needs.
11.16	Assist the patient to apply binders.
11.17	Care for the patient in skin and skeletal traction.
11.18	Assist with pre-operative and post-operative patient care.
11.19	Reinforce dressings under the supervision of the RN/LPN.
11.20	Obtain and record an apical pulse.
11.21	Provide cast care and/or pin care.
11.22	Provide care for visual devices, including but not limited to eyeglasses, artificial eyes, and contact lenses.
11.23	Provide care for hearing devices.
12.0	Apply principles of nutrition. The student will be able to:
12.01	Identify nutrients and food groups.
12.02	Develop a basic food plan.
12.03	Describe special diets.
12.04	Check the patient's diet tray for accuracy.
12.05	Monitor and document nutritional Intake.

	12.06 Identify and implement regional, cultural, and religious food guidelines/preferences.
	12.07 Demonstrate knowledge of the need for thickened liquids and fluid consistency.
	12.08 Identify methods of maintaining fluid balance, including encouraging and restricting fluids.
13.0	Provide care for geriatric patients. The student will be able to:
	13.01 Identify and assist with methods and procedures to prevent pressure ulcers.
	13.02 Identify and assist with methods to prevent falls in the elderly.
	13.03 Identify and assist with safety principles as related to the elderly.
	13.04 Describe general characteristics, particular needs, and age-related changes of the elderly.
	13.05 Identify attitudes and living habits that promote positive mental and physical health for the elderly.
	13.06 Distinguish between fact and fallacy about the aging process.
	13.07 Apply reality orientation techniques and validation therapy unless it is contraindicated by the patient's diagnosis.
	13.08 Recognize and respond appropriately to symptoms of common diseases, including dementia, depression/suicide, and Alzheimer’s.
	13.09 Provide and involve patients in diversional activities.
	13.10 Identify common alterations in elderly patient behavior.
	13.11 Provide care for patients with special needs, including but not limited to physical and cognitive impairments
	13.12 Demonstrate awareness of common behaviors in drug use and abuse in the elderly.
	13.13 Report concerns to the nurse and appropriate authorities related to drug use and abuse in the elderly patient.
	13.14 Identify the need for community resources and services available to the elderly and their caregiver.
	13.15 Identify components of the grief process.
	13.16 Demonstrate an understanding of end-of-life care, hospice, and palliative care.
14.0	Apply the principles of infection control specific to the nurse assistant. The student will be able to:
	14.01 Discuss transmission-based precautions.
	14.02 Explain and demonstrate proper hand hygiene.

	14.03 Identify the chain of infection.
	14.04 Provide care for patients with infectious diseases applying the principles of standard and transmission-based precautions.
	14.05 Apply the proper use of personal protective equipment (PPE) for all types of isolation, including donning and removing PPE appropriately.
	14.06 Follow isolation procedure with food tray, PPE, and other supplies/equipment.
	14.07 Collect a specimen from a patient in isolation.
15.0	Provide biological, psychological, and social support. The student will be able to:
	15.01 Discuss family roles and their significance to health.
	15.02 Respond to patient and family emotional needs.
16.0	Perform organizational skills following the patient care plan. The student will be able to:
	16.01 Organize and prioritize patient-care assignments.
	16.02 Complete assignments accurately and promptly.
17.0	Assist with restorative (rehabilitative) activities. The student will be able to:
	17.01 List the purposes of the restorative (rehabilitation) program.
	17.02 Assist patient with specified restorative (rehabilitation) needs.
	17.03 Assist patients/residents to reach the optimum level of independence.
18.0	Demonstrate knowledge of blood-borne diseases, including HIV/AIDS. The student will be able to:
	18.01 Distinguish between fact and fallacy about the transmission and treatment of diseases caused by blood-borne pathogens.
	18.02 Identify community resources and services available to individuals with diseases caused by blood-borne pathogens.
	18.03 Identify "at-risk" behaviors that promote the spread of HIV/AIDS and the public education needed to combat the spread of diseases caused by blood-borne pathogens.
	18.04 Apply infection control techniques designed to prevent the spread of diseases caused by blood-borne pathogens to the care of all patients following the Centers for Disease Control (CDC) guidelines.
	18.05 Demonstrate knowledge of the legal aspects of HIV/AIDS, including testing.

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools, and equipment, as well as experimental, quality, and safety procedures, are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate, and troubleshoot equipment/tools used to make observations. Students understand measurement error and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

Special Notes

This program focuses on broad, transferable skills and stresses understanding and demonstration of the following elements of the health care industry: planning, management, finance, technical and production skills, underlying principles of technology, labor issues, community issues, and health, safety, and environmental issues.

The length of this program is 120 hours. Completion of this program should enable the postsecondary student to be given advanced standing in the Patient Care Technician program, but will require additional evaluation and competencies to enter at the level of OCP A.

This program meets the Department of Health's education requirements for HIV/AIDS, Domestic Violence, and Prevention of Medical Errors. Although not a requirement for initial licensure, it is a requirement for renewal, therefore, the instructor **may** provide a certificate for renewal purposes to the student verifying these requirements have been met.

If students in this program are seeking a licensure, certificate, or registration through the Department of Health, please refer to 456.0635, F.S., for more information on disqualification for a license, certificate, or registration through the Department of Health.

Career and Technical Student Organization (CTSO)

CTSOs are co-curricular career and technical student organizations providing leadership training and reinforcing specific career and technical skills. Career and Technical Student Organizations provide activities for students as an integral part of the instruction offered. Other CTSOs not listed in this curriculum framework or recognized by the Florida Department of Education are permissible provided they support student mastery over the standards and benchmarks of this curriculum framework.

Cooperative Training – OJT

On-the-job training is appropriate but not required for this program. Whenever offered, the rules, guidelines, and requirements specified in the OJT framework apply.

Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology, and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

Note: postsecondary curriculum and regulated secondary programs cannot be modified.

Florida Department of Education
Curriculum Framework

The standards and benchmarks for this program were updated for the 2026-27 academic year.

Program Title: **Home Health Aide**
Program Type: **Career Preparatory**
Career Cluster: **Health Science**

Career Certificate Program	
Program Number	H170604
CIP Number	0351260200
Grade Level	30, 31
Program Length	165 hours
Teacher Certification	Refer to the **Program Structure** section.
CTSO	HOSA
SOC Codes (all applicable)	For program SOC codes, please see the Program and Course Tables section of the CTE Program Resources page linked below.
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml
Basic Skills Level	N/A

Purpose

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Health Science career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of Health Science career cluster. This program is designed to prepare students for employment as a home attendant, or home health aide or to provide supplemental training for persons previously or currently employed in these occupations.

The content includes, but is not limited to, instruction in those supportive services that are required to provide and maintain bodily and emotional comfort and to assist the patient toward independent living in a safe environment, as stated in Rules of the Department of Health - Minimum Standards for Home Health Agencies. Additional content areas to be included are: legal and ethical responsibilities; communication skills; basic human needs; a safe, clean, and healthy home environment; the developmental process; nutritional needs; emergency care; personal care; special care and rehabilitation needs of the client; household management; record-keeping; pet facilitated therapy; and employability skills.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Program Structure

This program is a planned sequence of instruction consisting of 2 occupational completion points.

This program is comprised of courses which have been assigned course numbers in the SCNS (Statewide Course Numbering System) in accordance with Section 1007.24 (1), F.S. Career and Technical credit shall be awarded to the student on a transcript in accordance with Section 1001.44(3) (b), F.S.

To teach the courses listed below, instructors must hold at least one of the teacher certifications indicated for that course.

The following table illustrates the postsecondary program structure:

OCP	Course Number	Course Title	Teacher Certification	Length
A	HSC0003	Basic Healthcare Worker	REG NURSE 7 G PRAC NURSE @7 %7%G (Must be a Registered Nurse)	90 hours
B	HCP0330	Home Health Aide		75 hours

Regulated Programs

Basic infection control, first aid, cardio- pulmonary resuscitation (CPR) heart saver level, vital signs, home-care skills, and client care skills are integral parts of this program. Clinical experiences, where the student may practice, demonstrate and perform the procedures associated with bedside client care, are an appropriate part of this program.

Please refer to 42CFR§484 for the clinical requirements for the Home Health Aide program.

Section 59A-8.0095 Home Health Aide, Administrative Rules, Department of Health and Rehabilitative Services contains much valuable information for program planning. These rules require that if the Home Health Aide receives training through a vocational school where professional standards have been established in accordance with the State Board of Education, a certificate of successful completion shall be on file with the employer.

Florida's Career Readiness Skills for CTE Programs

Employability Skills	
01.0	Apply academic skills to workplace scenarios.
01.01	Use reading skills.
01.02	Use writing skills.
01.03	Use mathematical strategies and procedures.
01.04	Use scientific principles and procedures.
02.0	Design a solution to an industry problem.
02.01	Use critical thinking.
02.02	Use creativity.
02.03	Make sound decisions.
02.04	Solve problems.
02.05	Reason.
02.06	Plan and organize.
03.0	Manage resources within an industry project
03.01	Manage time.
03.02	Manage money or resources.
03.03	Manage materials.
03.04	Manage personnel.
04.0	Oversee the subcomponents, operations and output of a technical or organizational system.
04.01	Manage systems.
04.02	Monitor systems.
04.03	Improve systems.
05.0	Use information for decision making.
05.01	Locate information.
05.02	Organize information.
05.03	Use information.

	05.04 Analyze information.
	05.05 Communicate information.
06.0	Apply relevant technology to workplace scenarios to aid productivity.
	06.01 Use technology.
07.0	Interpret and express interpersonal communication.
	07.01 Communicate verbally.
	07.02 Listen actively.
	07.03 Comprehend written material.
	07.04 Convey information in writing.
	07.05 Communicate nonverbally.
	07.06 Interpret nonverbal communication.
08.0	Interact with others to accomplish workplace goals.
	08.01 Collaborate with others in a team.
	08.02 Respond to customer needs.
	08.03 Exercise leadership.
	08.04 Negotiate to resolve conflict.
	08.05 Respect others.
09.0	Manage personal behavior to maximize productivity and professional growth.
	09.01 Demonstrate responsibility and self-discipline.
	09.02 Adapt and show flexibility.
	09.03 Work independently.
	09.04 Demonstrate a willingness to learn.
	09.05 Demonstrate integrity.
	09.06 Demonstrate professionalism.
	09.07 Take initiative.
	09.08 Display positive attitude.
	09.09 Take responsibility for professional growth.

Job Attainment	
10.0	Find, assess and apply to job opportunities.
10.01	Identify online job posts relevant to his or her career aspirations.
10.02	Compare and contrast the job posts' required qualifications, job duties, compensation, benefits and employers.
10.03	Define what information, documentation and writing prompts are required for the positions.
11.0	Communicate personal competence, character and fit for a job opportunity.
11.01	Develop a resume.
11.02	Write a cover letter.
11.03	Curate a professional portfolio that includes work products.
11.04	Prepare for and experience a mock job interview.
12.0	Cultivate and leverage relationships to professionally advance.
12.01	Request a signed reference letter, letter of recommendation and/or an online skill/professionalism endorsement.
12.02	Develop a plan to cultivate a professional digital footprint.
12.03	Develop a networking plan for a specific industry of interest.

Standards

After successfully completing this program, the student will be able to perform the following:

01.0 Demonstrate knowledge of the healthcare delivery system and health occupations.
02.0 Demonstrate the ability to communicate and use interpersonal skills effectively.
03.0 Demonstrate legal and ethical responsibilities.
04.0 Demonstrate an understanding of and apply wellness and disease concepts.
05.0 Recognize and practice safety and security procedures.
06.0 Recognize and respond to emergency situations.
07.0 Recognize and practice infection control procedures.
08.0 Demonstrate an understanding of information technology applications in healthcare.
09.0 Demonstrate employability skills.
10.0 Demonstrate knowledge of blood-borne diseases, including HIV/AIDS.
11.0 Apply basic math and science skills.
12.0 Use verbal and written communications specific to the Home Health Aide.
13.0 Demonstrate legal and ethical responsibilities specific to the Home Health Aide.
14.0 Perform physical comfort and safety functions specific to the Home Health Aide.
15.0 Provide personal patient care.
16.0 Perform patient care procedures.
17.0 Apply principles of nutrition.
18.0 Provide care for geriatric patients.
19.0 Apply the principles of infection control specific to the Home Health Aide.
20.0 Provide bio-psycho-social support.
21.0 Prioritize and perform functions following the patient care plan.
22.0 Assist with rehabilitative activities.
23.0 Perform home health-care services.

Florida Department of Education
Student Performance Standards

Program Title: Home Health Aide
Career Certificate Program Number: H170404

The **Basic Health Care Worker (HSC0003)** is referred to as the **Health Science Core** and is the first OCP in the majority of the Career Certificate Program health science programs. Secondary and Postsecondary students completing the health science core will not have to repeat the core in any other health science program in which it is a part. When the recommended sequence is followed, the structure allows students to complete at specified points for employment or remain for advanced training or cross-training.

Course Number: HSC0003
Occupational Completion Point: A
Basic Healthcare Worker – 90 Hours

To ensure consistency whenever these courses are offered, the health science core standards (1-11) and benchmarks have been placed in a separate document. To access this document, visit this link:
https://www.fldoe.org/file/20894/health-sci-core-psav-cc-2627.rtf

Course Number: HCP0330
Occupational Completion Point: B
Home Health Aide – 75 Hours

12.0	Use verbal and written communications specific to the Home Health Aide. The student will be able to:
12.01	Obtain specified data from the patient and family.
12.02	Utilize verbal and written information to assist with the patient's care plan.
13.0	Demonstrate legal and ethical responsibilities specific to the Home Health Aide. The student will be able to:
13.01	Demonstrate legal and ethical behavior within the role and scope of home health aide responsibilities.
13.02	Follow policies and procedures concerning care as directed by the employer affecting the health, safety, and well-being of patients in the home setting.
13.03	Recognize and report signs of abuse, physical, verbal, and substance.
13.04	Follow legal guidelines in documentation.
13.05	Exhibit behavior supporting and promoting residents' rights.
13.06	Recognize and follow the scope of practice and role limitations for a home health aide.

14.0	Perform physical comfort and safety functions specific to the Home Health Aide. The student will be able to:
14.01	Maintain a clean and safe home environment for the patient.
14.02	Adjust bed and/or side rails.
14.03	Transfer patient with mechanical lift using proper body mechanics and patient safety measures.
14.04	Demonstrate proper turning and positioning according to the care plan.
14.05	Implement fall prevention measures as directed, i.e., clutter-free pathways, locked wheelchair, etc.
14.06	Apply supportive comfort devices as directed (e.g., footboard, over-bed cradle, alternating pressure mattress).
14.07	Demonstrate and assist the patient in dangling.
14.08	Assist patient in ambulation, including the use of a crutch, cane, or walker.
14.09	Demonstrate the proper wheelchair safety technique and assist the patient as needed with use.
14.10	Assist patient with care and use of prosthetic/orthotic devices.
14.11	Describe emergency evacuation procedures with adaptations to the home setting.
14.12	Implement appropriate regulatory and accrediting agency patient safety guidelines.
15.0	Provide personal patient care. The student will be able to:
15.01	Perform bed bath; observe and report changes in a patient.
15.02	Perform a back rub.
15.03	Demonstrate procedures for safety in the bathroom, including the use of adaptive shower equipment such as shower chairs, long-handled bath sponge, grab bars, extended shower hose, rubber mat in tub or shower, and rubber-based rug outside the shower.
15.04	Assist with shower or tub bath, including use of specialty tubs.
15.05	Assist patient with sink, tub, shower, shower cap, or bed shampoo.
15.06	Demonstrate the use of a safety and/or electric razor to shave the patient.
15.07	Demonstrate how to groom a patient, including hair, skin, foot, and nail care.
15.08	Assist with and/or administer oral hygiene, including denture care.
15.09	Assist patient with toileting, using various types of restorative and rehabilitative equipment.

	15.10 Assist the patient to dress.
	15.11 Assist patient with meals.
16.0	Perform patient care procedures. The student will be able to:
	16.01 Make an unoccupied and occupied bed.
	16.02 Provide passive range-of-motion exercises.
	16.03 Apply anti-embolic hose and sequential compression devices.
	16.04 Understand and demonstrate proper collection of urine, strained, timed urine, and/or routine urine specimen.
	16.05 Observe skin while bathing for allergic reaction to a catheter or any leaking.
	16.06 Monitor fluid intake and output (I&O), including encouraging and restricting fluids.
	16.07 Observe, record, and report the patient's emesis.
	16.08 Assist with ostomy care and alert the nurse of any unusual observations while performing skin care.
	16.09 Collect stool specimen and alert nurse of unusual odors, colors, or characteristics.
	16.10 Care for patients receiving oxygen therapy, making sure the patient receives the correct flow of oxygen.
17.0	Apply principles of nutrition. The student will be able to:
	17.01 Identify nutrients and food groups.
	17.02 Identify and implement regional, cultural, and religious food guidelines/preferences.
	17.03 Describe special diets.
	17.04 List factors that must be considered when purchasing food.
	17.05 Follow the prescribed basic food plan.
	17.06 List factors that must be considered when storing food.
	17.07 Identify methods of maintaining fluid balance, including encouraging and restricting fluids.
	17.08 Identify methods of food preparation.
	17.09 Discuss the preparation and serving of trays in the home.

18.0	Provide care for geriatric patients. The student will be able to:
18.01	Identify safety principles as related to the elderly.
18.02	Describe general characteristics, particular needs, and problems of the elderly.
18.03	Identify attitudes and living habits that promote positive mental and physical health for the elderly.
18.04	Distinguish between fact and fallacy about the aging process.
18.05	Identify community resources and services available to the elderly and their caregiver.
18.06	Apply reality orientation techniques and validation therapy.
18.07	Provide and involve patients in diversional activities.
18.08	Identify common alterations in elderly patient behavior or health status and follow up within the home health aide's scope of performance.
18.09	Provide care for patients with special needs (e.g., impaired hearing, impaired vision, immobility, impaired body functions).
19.0	Apply the principles of infection control specific to the Home Health Aide. The student will be able to:
19.01	Provide care for patients with infectious diseases in the home.
19.02	Follow isolation procedures with food tray, personal protective equipment (PPE), supplies/equipment, and other materials in the home.
19.03	Utilize standard precautions in all home care.
19.04	Discuss transmission-based precautions.
20.0	Provide bio-psycho-social support. The student will be able to:
20.01	Discuss family roles and their significance to health.
20.02	Respond to patient and family emotional needs.
21.0	Prioritize and perform functions following the patient care plan. The student will be able to:
21.01	Organize patient-care assignments.
21.02	Complete assignments accurately and in a timely manner per the care plan.
22.0	Assist with rehabilitative activities. The student will be able to:

	22.01 List the purposes of restorative (rehabilitation) programs.
	22.02 Assist patient with specified restorative (rehabilitation) needs.
	22.03 Assist patients/residents to reach the optimum level of independence.
23.0	Perform home health-care services. The student will be able to:
	23.01 Establish and follow a collaborative care plan with the patient and family.
	23.02 Perform patient-related cleaning tasks and laundry per care plan.
	23.03 Identify methods for medication storage.
	23.04 Assist patient with taking self-administered prescribed medication in the home, and identify possible side effects and emergency procedures for adverse reactions in accordance with 59A-8.0095, F.A.C.
	23.05 Demonstrate how to utilize equipment and supplies in the home.

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools, and equipment, as well as experimental, quality, and safety procedures, are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate, and troubleshoot equipment/tools used to make observations. Students understand measurement error and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

Special Notes

Reinforcement of basic skills in English, mathematics, and science appropriate for the job preparatory programs occurs through vocational classroom instruction and applied laboratory procedures or practice.

This program meets the Department of Health's education requirements for HIV/AIDS, Domestic Violence, and Prevention of Medical Errors. Although not a requirement for initial licensure, it is a requirement for renewal; therefore, the instructor **may** provide a certificate for renewal purposes to the student, verifying these requirements have been met.

The Core should be taken first in the program. Following the successful completion of the core, the student is eligible to take the National Health Care Foundation Skill Standards Assessment with instructor approval and the completion of a portfolio.

Career and Technical Student Organization (CTSO)

CTSOs are co-curricular career and technical student organizations providing leadership training and reinforcing specific career and technical skills. Career and Technical Student Organizations provide activities for students as an integral part of the instruction offered. Other CTSOs not listed in this curriculum framework or recognized by the Florida Department of Education are permissible provided they support student mastery over the standards and benchmarks of this curriculum framework.

Cooperative Training – OJT

On-the-job training is appropriate but not required for this program. Whenever offered, the rules, guidelines, and requirements specified in the OJT framework apply.

Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as

instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology, and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

Note: Postsecondary curriculum and regulated secondary programs cannot be modified.

Florida Department of Education
Curriculum Framework

The standards and benchmarks for this program were updated for the 2026-27 academic year.

Program Title: **Practical Nursing**
Program Type: **Career Preparatory**
Career Cluster: **Health Science**

Career Certificate Program		
Program Number	H170607	
CIP Number	0351390101	
Grade Level	30, 31	
Standard Length	1350 hours	
Teacher Certification	Refer to the **Program Structure** section.	
CTSO	HOSA, Skills USA	
Primary SOC Code	For program SOC codes, please see the Program and Course Tables section of the CTE Program Resources page linked below.	
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml	
Basic Skills Level	Computation (Mathematics): 11	Communications (Reading and Language Arts): 11

Purpose

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Health Science career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning, problem-solving skills, work attitudes, general employability skills, technical skills, occupation-specific skills, and knowledge of all aspects of the Health Science career cluster. This program is designed to prepare students for employment as Licensed Practical Nurses. The program must be approved by the Florida Board of Nursing in order for graduates to apply to take the examination to practice as a Licensed Practical Nurse.

The content includes but is not limited to theoretical instruction and clinical experience applying the clinical judgment measurement model in medical, surgical, psychiatric, obstetric, pediatric, and geriatric nursing, acute care, long-term care, and community settings. Application of vocational role and function; personal, family, and community health concepts; nutrition, human growth and development over the lifespan; body

structure and function; interpersonal relationship skills; pharmacology and medication administration; legal and ethical aspects of practice, respect and civility, and self-care for nurses.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Program Structure

This program is a planned sequence of instruction consisting of two (2) occupational completion points.

This program is comprised of courses which have been assigned course numbers in the SCNS (Statewide Course Numbering System) in accordance with Section 1007.24 (1), F.S. Career and Technical credit shall be awarded to the student on a transcript in accordance with Section 1001.44(3)(b), F.S.

To teach the course(s) listed below, instructors must hold at least one of the teacher certifications indicated for that course.

The following table illustrates the postsecondary program structure:

OCP	Course Number	Course Title	Teacher Certification	Length
A	PRN0098	Practical Nursing (PN) Foundations 1	REG NURSE 7 G PRAC NURSE @7 (Must be a Registered Nurse)	300 hours
	PRN0099	Practical Nursing (PN) Foundations 2		300 hours
B	PRN0290	Practical Nursing (PN) Medical Surgical 1	REG NURSE 7 G PRAC NURSE @7 (Must be a Registered Nurse)	300 hours
	PRN0291	Practical Nursing (PN) Medical Surgical 2		300 hours
	PRN0690	Practical Nursing (PN) Transition to Practice		150 hours

Please refer to 464.019(1)(b), F.S., for faculty credential requirements to teach this program.

National Standards (NS)

Students are eligible to apply to take the national licensing examination after satisfactory completion of an approved program. The National Council Licensure Examination for Practical Nurses, NCLEX-PN, is a computer-adaptive examination that the nursing graduate must take and pass in order to practice as a Licensed Practical Nurse.

Programs identified as having Industry or National Standards have been cross-walked with the corresponding standards and/or benchmarks. Industry or National Standards for the Practical Nursing program can be found using the following links: https://www.ncsbn.org/publications/2023-nclex-pn-test-plan and https://www.ncsbn.org/exams-research/report-of-findings-from-the-2021-lpnvn-nursing-knowledge-survey

Regulated Programs

The Practical Nursing Program must comply with the Florida Board of Nursing rules, including faculty qualifications. For questions regarding this process, please contact: Florida Board of Nursing, 4052 Bald Cypress Way, Tallahassee, FL 32399-3752.

Human Trafficking Course – SB 340 NCLEX Requirement – Effective July 1, 2027

Graduates of Florida-approved **Practical Nursing (LPN) and Registered Nursing (RN) programs** applying for initial Florida licensure by examination must complete a **two-hour Human Trafficking course after graduation and prior to taking the NCLEX**, as required by **s. 464.008(1)(e), F.S.**

The course must contain the content required for the Human Trafficking continuing education course pursuant to **s. 464.013(3)(c), F.S.**

Human Trafficking Course Requirements and Resources: Registered Nurse (RN) Renewal – Continuing Education Requirements

This course is currently identified by the course provider as a two-hour Florida Human Trafficking course that meets the content standard for initial licensure under **s. 464.008, F.S., as amended by SB 340**, and the requirements of **s. 464.013(3)(c), F.S.** The course is offered online and provides a certificate of completion. Because students completing the course prior to initial licensure may not yet have a Florida nursing license or an active CE Broker account, each student is responsible for **downloading, retaining, and safeguarding the certificate of completion** as documentation of course completion.

Implementation: Nursing programs should notify students prior to graduation that the two-hour Human Trafficking course is a **post-graduation, pre-NCLEX requirement**. Graduates should complete the course, retain documentation of successful completion, and follow the current Florida Board of Nursing and Florida Department of Health requirements for verification and NCLEX eligibility.
Statutory Authority: Section 464.008(1)(e), Florida Statutes; Section 464.013(3)(c), Florida Statutes; CS/SB 340 (2026), Chapter 2026-82.

Clinical instruction of nursing students will meet the requirements of 464.019, F.S. Clinical experience must make up at least 50% of the total program. Simulated practice and clinical experiences are included as an integral part of this program. **Clinical Simulation may be used for no more than 50% of the total clinical experience.**

Florida's Career Readiness Skills for CTE Programs

Employability Skills	
01.0	Apply academic skills to workplace scenarios.
	01.01 Use reading skills.
	01.02 Use writing skills.
	01.03 Use mathematical strategies and procedures.
	01.04 Use scientific principles and procedures.
02.0	Design a solution to an industry problem.
	02.01 Use critical thinking.
	02.02 Use creativity.
	02.03 Make sound decisions.
	02.04 Solve problems.
	02.05 Reason.
	02.06 Plan and organize.
03.0	Manage resources within an industry project
	03.01 Manage time.
	03.02 Manage money or resources.
	03.03 Manage materials.
	03.04 Manage personnel.
04.0	Oversee the subcomponents, operations and output of a technical or organizational system.
	04.01 Manage systems.
	04.02 Monitor systems.
	04.03 Improve systems.
05.0	Use information for decision making.
	05.01 Locate information.
	05.02 Organize information.
	05.03 Use information.
	05.04 Analyze information.

	05.05 Communicate information.
06.0	Apply relevant technology to workplace scenarios to aid productivity.
	06.01 Use technology.
07.0	Interpret and express interpersonal communication.
	07.01 Communicate verbally.
	07.02 Listen actively.
	07.03 Comprehend written material.
	07.04 Convey information in writing.
	07.05 Communicate nonverbally.
	07.06 Interpret nonverbal communication.
08.0	Interact with others to accomplish workplace goals.
	08.01 Collaborate with others in a team.
	08.02 Respond to customer needs.
	08.03 Exercise leadership.
	08.04 Negotiate to resolve conflict.
	08.05 Respect others.
09.0	Manage personal behavior to maximize productivity and professional growth.
	09.01 Demonstrate responsibility and self-discipline.
	09.02 Adapt and show flexibility.
	09.03 Work independently.
	09.04 Demonstrate a willingness to learn.
	09.05 Demonstrate integrity.
	09.06 Demonstrate professionalism.
	09.07 Take initiative.
	09.08 Display positive attitude.
	09.09 Take responsibility for professional growth.
Job Attainment	
10.0	Find, assess and apply to job opportunities.

	10.01 Identify online job posts relevant to his or her career aspirations.
	10.02 Compare and contrast the job posts' required qualifications, job duties, compensation, benefits and employers.
	10.03 Define what information, documentation and writing prompts are required for the positions.
11.0	Communicate personal competence, character and fit for a job opportunity.
	11.01 Develop a resume.
	11.02 Write a cover letter.
	11.03 Curate a professional portfolio that includes work products.
	11.04 Prepare for and experience a mock job interview.
12.0	Cultivate and leverage relationships to professionally advance.
	12.01 Request a signed reference letter, letter of recommendation and/or an online skill/professionalism endorsement.
	12.02 Develop a plan to cultivate a professional digital footprint.
	12.03 Develop a networking plan for a specific industry of interest.

Standards

After successfully completing this program, the student will have demonstrated mastery of the following student learning outcomes:

01.0 Integrated Processes – Apply the following fundamental integrated processes to the practice of practical nursing and integrate them throughout the Client Needs categories and subcategories in every course of the program **(See Client Needs categories from NCSBN, 2023). This standard is part of EVERY course in the Practical Nursing program.**
02.0 Demonstrate the ability to participate in teamwork and collaboration, using appropriate written and verbal therapeutic communication, interpersonal skills, and standard nursing terminology (Coordinated Care, Health Promotion, and Maintenance).
03.0 Demonstrate the ability to participate in teamwork and collaboration, using organizational functions, the plan of care, computer literacy, and electronic health record use (Coordinated Care, Health Promotion and Maintenance).
04.0 Demonstrate legal and ethical aspects of practice and responsibilities specific to the nursing profession (Coordinated Care).
05.0 Recognize and practice safety and security procedures, including environmental safety, client safety, and healthcare worker safety (Coordinated Care, Safety and Infection Control, Physiological Adaptation).
06.0 Recognize and practice infection control principles and procedures and demonstrate maintenance of aseptic technique (Coordinated Care, Safety and Infection Control, Physiological Adaptation).
07.0 Perform client and personal care (Safety and Infection Control, Basic Care and Comfort, Reduction of Risk Potential).
08.0 Select clinical judgment functions in geriatric care (Psychosocial Integrity).
09.0 Explain foundational and evidence-based practice thinking that supports practical nursing care, describing the body structure and function of the healthy human body, including but not limited to the following body systems **(**Coordinated Care, Health Promotion and Maintenance)**.**
10.0 Explain foundational thinking that supports human growth and development across the lifespan (Coordinated Care, Health Promotion and Maintenance).
11.0 Develop teamwork and collaboration through clinical judgment, the nursing process, clinical reasoning, critical thinking, the use of SBAR (situation, background, assessment, recommendation), and the nursing care plan (Coordinated Care).
12.0 Demonstrate nursing knowledge, skills, attitudes (KSAs), procedures, and the following skills (Coordinated Care, Safety and Infection Control, Health Promotion and Maintenance, Pharmacological Therapies, Reduction of Risk Potential, Physiological Adaptation).
13.0 Demonstrate the use of clinical judgment to provide competent psychiatric or mental health care that includes the following diseases and disorders: schizophrenia, mood disorders, personality disorders, anxiety disorders, substance abuse, substance use disorders, impulse control disorders, eating disorders, and neurodevelopmental disorders (Psychosocial Integrity).
14.0 Demonstrate nursing knowledge, skills, attitudes (KSAs), and procedures related to safe administration of medication that include the following skills (Coordinated Care, Safety and Infection Control, Health Promotion and Maintenance, Pharmacological Therapies, Reduction of Risk Potential, Physiological Adaptation).
15.0 Demonstrate nursing knowledge, skills, attitudes (KSAs), and procedures related to safe intravenous access and intravenous medication administration that include the following skills (Coordinated Care, Safety and Infection Control, Health Promotion and Maintenance, Pharmacological Therapies, Reduction of Risk Potential, Physiological Adaptation).
16.0 Interpret evidence-based practice to provide health awareness in community settings (Reduction of Risk Potential).
17.0 Demonstrate the use of clinical judgment to care for pre-operative and post-operative clients (Reduction of Risk Potential, Physiological Adaptation).
18.0 Demonstrate the use of clinical judgment to care for a medical surgical client (MS1: cardiovascular/circulatory, respiratory, lymphatic/immune, musculoskeletal, endocrine, integumentary/sensory systems) (Reduction of Risk Potential, Physiological Adaptation).

19.0 Demonstrate the use of clinical judgment to care for a medical surgical client (MS2: gastrointestinal, neurological, urinary, reproductive, oncologic. (Reduction of Risk Potential, Physiological Adaptation).

20.0 Demonstrate the use of clinical judgment to care for an obstetric or maternal/newborn client needing intrapartum care (Health Promotion and Maintenance, Reduction of Risk Potential, Physiological Adaptation, Coordinated Care).

21.0 Demonstrate the use of clinical judgment to care for a pediatric client with the following diseases or disorders, including SIDS/SUIDS (Health Promotion and Maintenance, Reduction of Risk Potential, Physiological Adaptation, Coordinated Care).

22.0 Demonstrate the use of evidence-based practice and readiness for safe transition to nursing practice.

Florida Department of Education
Student Performance Standards

Program Title: Practical Nursing
Career Certificate Program Number: H170607

Course Number: PRN0098 **Occupational Completion Point: A** **Practical Nursing (PN) Foundations 1 – 300 Hours**	
01.0	Integrated Processes – Apply the following fundamental integrated processes to the practice of practical nursing and integrate them throughout the Client Needs categories and subcategories in every course of the program **(See Client Needs categories from NCSBN, 2023). This standard is part of EVERY course in the Practical Nursing program.** The student will be able to show:
01.01	Caring – Interaction of the practical nurse and client in an atmosphere of mutual respect and trust. In this collaborative environment, the practical nurse provides support and compassion to help achieve desired therapeutic outcomes.
01.02	Clinical judgment – The observed outcome of critical thinking and decision-making. It is an iterative process that uses nursing knowledge to observe and assess presenting situations, identify a prioritized client concern, and generate the best possible evidence-based solutions to deliver safe client care. The six clinical judgment functions include: recognizing cues, analyzing cues, prioritizing and hypothesizing, generating solutions, taking action, and evaluating outcomes.
01.03	Client problem-solving process (nursing process) – A scientific approach to client care that includes data collection, planning, implementation, and evaluation.
01.04	Communication and documentation – Verbal and nonverbal interactions between the practical nurse and the client, as well as other members of the healthcare team. Events and activities associated with client care are validated in written and/or electronic records that reflect standards of practice and accountability in the provision of care.
01.05	Culture and spirituality – Interaction of the nurse and the client (individual, family or group, including significant others, and population) that recognizes and considers the client-reported, self-identified, unique and individual preferences to client care, the applicable standard of care, and legal considerations.
01.06	Teaching and learning – Facilitation of the acquisition of knowledge, skills, and attitudes (KSAs) to assist in promoting a change in behavior.
01.07	Professionalism, respect, and civility toward clients and colleagues in all educational and practice settings.
01.08	Application of a self-care plan, including the demonstration of healthy lifestyle choices and personal health maintenance.
01.09	A demonstration of nursing care in clinical experiences, simulation, or skills lab of at least ___ hours.
02.0	Demonstrate the ability to participate in teamwork and collaboration, using appropriate written and verbal therapeutic communication, interpersonal skills, and standard nursing terminology (Coordinated Care, Health Promotion and Maintenance). The student will be able to:
02.01	Describe teamwork and collaboration through the healthcare system and healthcare occupations.
02.02	Participate as a member of an interdisciplinary team.
02.03	Monitor activities of assistive personnel.

	02.04 Recognize and report staff conflict.
	02.05 Participate in staff education (in-services, continued competency).
	02.06 Follow up with the client after discharge.
	02.07 Participate in the client discharge or transfer.
	02.08 Participate in the client referral process.
	02.09 Provide and receive reports.
	02.10 Recognize self-limitations of tasks/assignments and seek assistance when needed.
	02.11 Participate in a quality improvement (QI) activity (collecting data, serving on QI committee).
	02.12 Identify barriers to communication.
	02.13 Identify barriers to learning.
03.0	Demonstrate the ability to participate in teamwork and collaboration, using organizational functions, the plan of care, computer literacy, and electronic health record use (Coordinated Care, Health Promotion, and Maintenance). The student will be able to:
	03.01 Contribute to the development of and/or update the client plan of care.
	03.02 Participate in providing cost-effective care.
	03.03 Use information technology in client care.
	03.04 Verify and process healthcare orders.
04.0	Demonstrate legal and ethical aspects of practice and responsibilities specific to the nursing profession (Coordinated Care). The student will be able to:
	04.01 Provide information about advance directives.
	04.02 Advocate for client rights and needs (including but not limited to domestic violence and human trafficking).
	04.03 Promote client self-advocacy.
	04.04 Assign client care and/or related tasks (unlicensed assistive personnel; LPN).
	04.05 Involve the client in care decision-making.
	04.06 Maintain client confidentiality.
	04.07 Provide for privacy needs.

	04.08 Practice in a manner consistent with the code of ethics for nurses.
	04.09 Respond to the unsafe practice of a healthcare provider (intervene, report).
	04.10 Participate in the client consent process.
	04.11 Follow regulations/policies for reporting specific issues (abuse, neglect, gunshot wound, communicable disease).
	04.12 Provide care within the legal scope of practice (including but not limited to nursing laws and rules for Florida and recognizing impairment in the workplace).
05.0	Recognize and practice safety and security procedures, including environmental safety, client safety, and healthcare worker safety (Coordinated Care, Safety and Infection Control, Physiological Adaptation). The student will be able to:
	05.01 Identify client allergies and intervene as appropriate.
	05.02 Verify the identity of the client.
	05.03 Assist in and/or reinforce education to the client about safety precautions.
	05.04 Use safe client handling techniques (body mechanics).
	05.05 Identify and address unsafe conditions in healthcare and home environments.
	05.06 Follow protocol for timed client monitoring (safety checks).
	05.07 Implement the least restrictive restraints or seclusion.
	05.08 Acknowledge and document practice errors (incident or safety report).
	05.09 Assure the availability and safe functioning of client care equipment.
	05.10 Initiate and participate in security alerts (infant abduction, flight risk).
	05.11 Participate in preparation for internal and external disasters (fire, natural disaster, active shooter, evacuation).
	05.12 Respond and intervene in a client life-threatening situation (cardiopulmonary resuscitation).
06.0	Recognize and practice infection control principles and procedures and demonstrate maintenance of aseptic technique (Coordinated Care, Safety and Infection Control, Physiological Adaptation). The student will be able to:
	06.01 Apply principles of infection control (PPE, aseptic technique, isolation, standard precautions).
	06.02 Explain the OSHA bloodborne pathogen standard.
	06.03 Outline HIV/AIDS awareness and resources.
07.0	Perform client and personal care (Safety and Infection Control, Basic Care and Comfort, Reduction of Risk Potential). The student will be able to:

	07.01 Use transfer assistive devices (gait belt, slide board, mechanical lift).
	07.02 Provide care to a client with bowel or bladder management protocol.
	07.03 Provide for mobility needs (ambulation, range of motion, transfer, repositioning, use of adaptive equipment).
	07.04 Use measures to maintain or improve client skin integrity.
	07.05 Provide care to an immobilized client based on need.
	07.06 Assist in the care and comfort for a client with a visual and/or hearing impairment (body functions, immobility).
	07.07 Promote alternative/complementary therapy in providing client care (music therapy, pet therapy).
	07.08 Provide non-pharmacological measures for pain relief (imagery, massage, repositioning).
	07.09 Evaluate pain using standardized rating scales.
	07.10 Monitor client intake and output.
	07.11 Assist with activities of daily living (including but not limited to bed mobility, transfer, ambulation, mobility, dressing, eating, elimination, personal hygiene, and grooming).
	07.12 Monitor and provide for nutritional needs of the client (including therapeutic diets, cultural and religious food preferences, nutrients, sources, and healthcare significance).
	07.13 Assist in providing postmortem care.
	07.14 Provide measures to promote sleep and rest.
	07.15 Apply and check proper use of compression stockings and/or sequential compression devices (SCDs).
	07.16 Identify the client at risk and implement interventions.
	07.17 Check and monitor vital signs (including oxygen saturation).
08.0	Select clinical judgment functions in geriatric care (Psychosocial Integrity). The student will be able to:
	08.01 Assist in the care of the cognitively impaired client (including Alzheimer's, dementia, and other neurocognitive care).
	08.02 Participate in reminiscence therapy, validation therapy, or reality orientation.
	08.03 Report concerns to the nurse related to elder abuse, neglect, and maltreatment.
	08.04 Initiate and participate in security alerts (flight risk).
	08.05 Provide end-of-life, palliative, and hospice care and education to clients.

09.0	Explain foundational and evidence-based practice thinking that supports practical nursing care, describing the body structure and function of the healthy human body, including but not limited to the following body systems (Coordinated Care, Health Promotion and Maintenance). The student will be able to:
09.01	Describe and introduce body structure and function.
09.02	Describe the structure and function of tissues and cells.
09.03	Describe the structure and function of the integumentary system.
09.04	Describe the structure and function of the nervous system.
09.05	Describe the structure and function of the sensory system.
09.06	Describe the structure and function of the skeletal system.
09.07	Describe the structure and function of the muscular system.
09.08	Describe the structure and function of the endocrine system.
09.09	Describe the structure and function of the cardiovascular system.
09.10	Describe the structure and function of the hematologic system.
09.11	Describe the structure and function of the respiratory system.
09.12	Describe the structure and function of the digestive system.
09.13	Describe the structure and function of the urinary system.
09.14	Describe the structure and function of the reproductive system.
09.15	Describe the structure and function of the immune system.

Course Number: PRN0099 Occupational Completion Point: A Practical Nursing (PN) Foundations 2 – 300 Hours	
01.0	Integrated Processes – Apply the following fundamental integrated processes to the practice of practical nursing and integrate them throughout the Client Needs categories and subcategories in every course of the program **(See Client Needs categories from NCSBN, 2023). This standard is part of EVERY course in the Practical Nursing program**. The student will be able to show:
01.01	Caring – Interaction of the practical nurse and client in an atmosphere of mutual respect and trust. In this collaborative environment, the practical nurse provides support and compassion to help achieve desired therapeutic outcomes.
01.02	Clinical judgment – The observed outcome of critical thinking and decision-making. It is an iterative process that uses nursing knowledge to observe and assess presenting situations, identify a prioritized client concern, and generate the best possible

		evidence-based solutions in order to deliver safe client care. The six clinical judgment functions include: recognizing cues, analyzing cues, prioritizing and hypothesizing, generating solutions, taking action, and evaluating outcomes.
	01.03	Client problem-solving process (nursing process) – A scientific approach to client care that includes data collection, planning, implementation, and evaluation.
	01.04	Communication and documentation – Verbal and nonverbal interactions between the practical nurse and the client, as well as other members of the healthcare team. Events and activities associated with client care are validated in written and/or electronic records that reflect standards of practice and accountability in the provision of care.
	01.05	Culture and spirituality – Interaction of the nurse and the client (individual, family or group, including significant others, and population) that recognizes and considers the client-reported, self-identified, unique and individual preferences to client care, the applicable standard of care, and legal considerations.
	01.06	Teaching and learning – Facilitation of the acquisition of knowledge, skills, and attitudes (KSAs) to assist in promoting a change in behavior.
	01.07	Professionalism, respect, and civility toward clients and colleagues in all educational and practice settings.
	01.08	Application of a self-care plan, including the demonstration of healthy lifestyle choices and personal health maintenance.
	01.09	A demonstration of nursing care in clinical experiences, simulation, or skills lab of at least ___ hours.
10.0		Explain foundational thinking that supports human growth and development across the lifespan (Coordinated Care, Health Promotion and Maintenance). The student will be able to:
	10.01	Provide care that meets the needs of the newborn less than 1 month old through the infant or toddler client up through 2 years.
	10.02	Provide care that meets the needs of the preschool, school-age, and adolescent client ages 3 through 17 years.
	10.03	Provide care that meets the needs of the adult client ages 18 through 64 years.
	10.04	Provide care that meets the needs of the adult client ages 65 and over.
	10.05	Compare the client to developmental milestones.
	10.06	Assist the client with expected life transitions (attachment to newborn, parenting, retirement).
	10.07	Reinforce client teaching on expected client reactions to grief and loss (e.g., denial to fear).
11.0		Develop teamwork and collaboration through clinical judgment, the nursing process, clinical reasoning, critical thinking, the use of SBAR (situation, background, assessment, recommendation), and the nursing care plan (Coordinated Care). The student will be able to:
	11.01	Organize and prioritize care based on client needs.
	11.02	Participate in client data collection.
	11.03	Collect data for health history (client medical history and family medical history).
	11.04	Collect baseline physical data (skin integrity, height, and weight).

	11.05 Perform focused data collection based on the client's condition (neurological checks, circulatory checks).
	11.06 Compare client laboratory values to normal laboratory values.
	11.07 Evaluate the appropriateness of the healthcare provider's order for the client.
12.0	Demonstrate nursing knowledge, skills, attitudes (KSAs), procedures, and the following skills (Coordinated Care, Safety and Infection Control, Health Promotion and Maintenance, Pharmacological Therapies, Reduction of Risk Potential, Physiological Adaptation). The student will be able to:
	12.01 Provide cooling/warming measures to restore normal body temperature.
	12.02 Perform wound care and/or a dressing change.
	12.03 Provide care for the client with a drainage device (wound drain, chest tube).
	12.04 Evaluate the client's oxygen (O_2) saturation.
	12.05 Intervene to improve the client's respiratory status (breathing treatment, suctioning, repositioning).
	12.06 Perform blood glucose monitoring.
	12.07 Collect a specimen for diagnostic testing (including blood, urine, stool, sputum).
	12.08 Monitor diagnostic or laboratory test results.
	12.09 Use precautions to prevent injury and/or complications associated with a procedure or diagnosis.
	12.10 Assist with the performance of a diagnostic or invasive procedure.
	12.11 Reinforce client education about procedures and treatments
	12.12 Monitor client responses to procedures and treatments.
	12.13 Insert, maintain, and remove a urinary catheter.
	12.14 Perform irrigation (urinary catheter, bladder, wound, ear, nose, eye).
	12.15 Provide care to a client with an ostomy (colostomy, ileostomy, urostomy).
	12.16 Insert, maintain, and remove a nasogastric (NG) tube (per facility policy).
	12.17 Provide site care for the client with enteral tubes.
	12.18 Provide feeding for the client with enteral tubes.

13.0	Demonstrate the use of clinical judgment to provide competent psychiatric or mental health care that includes the following diseases and disorders: schizophrenia, mood disorders, personality disorders, anxiety disorders, substance abuse, substance use disorders, impulse control disorders, eating disorders, and neurodevelopmental disorders (Psychosocial Integrity). The student will be able to:
13.01	Reinforce education to caregivers/family on ways to manage the client with behavioral disorders.
13.02	Incorporate behavioral management techniques when caring for a client.
13.03	Participate in a client group session.
13.04	Collect data regarding the client's psychosocial functioning.
13.05	Identify the client's use of effective and ineffective coping mechanisms.
13.06	Recognize stressors that affect client care.
13.07	Assist the client to cope and adapt to stressful events and changes in health status.
13.08	Initiate and participate in security alerts (flight risk).
13.09	Collect data on the client's potential for violence to self and others.
13.10	Assist in managing the care of an angry and/or agitated client (de-escalation techniques).
13.11	Plan care with consideration of the client's spiritual and cultural beliefs, and/or gender identity.
13.12	Explore reasons for client non-compliance with the treatment plan.
13.13	Assist in the care of a client experiencing sensory/perceptual alterations.
13.14	Promote the positive self-esteem of a client.
13.15	Identify signs and symptoms of substance abuse, substance use disorder, withdrawal, and overdose.
13.16	Provide emotional support to the client.
13.17	Use therapeutic communication techniques with the client.
13.18	Promote a therapeutic environment.
13.19	Provide family wellness education and information for the prevention of high-risk behaviors (substance abuse, sexual practices, and smoking cessation information).
14.0	Demonstrate nursing knowledge, skills, attitudes (KSAs), and procedures related to safe administration of medication that include the following skills (Coordinated Care, Safety and Infection Control, Health Promotion and Maintenance, Pharmacological Therapies, Reduction of Risk Potential, Physiological Adaptation). The student will be able to:
14.01	Perform calculations needed for medication administration.

	14.02 Reinforce education to the client regarding medications.
	14.03 Evaluate the client's response to medication (side effects, adverse reactions, interactions, therapeutic effects, critical laboratory values).
	14.04 Follow the rights of medication administration.
	14.05 Maintain medication safety practices (storage, checking for expiration dates, compatibility, disposal), including medical error prevention training.
	14.06 Reconcile and maintain medication list or medication administration record (prescribed medications, herbal supplements, over-the-counter medications).
	14.07 Collect required data prior to medication administration (contraindications, current medications).
	14.08 Administer medication by oral route (including sublingual, buccal).
	14.09 Administer medication by various gastrointestinal tubes.
	14.10 Administer a subcutaneous, intradermal, or intramuscular medication.
	14.11 Mix client medications from two vials as necessary (insulin, reconstitution).
	14.12 Administer medication by ear, eye, nose, inhalation, rectum, vagina, or skin route.
	14.13 Count controlled substances and report discrepancies.
15.0	Demonstrate nursing knowledge, skills, attitudes (KSAs), and procedures related to safe intravenous access and intravenous medication administration that include the following skills (Coordinated Care, Safety and Infection Control, Health Promotion and Maintenance, Pharmacological Therapies, Reduction of Risk Potential, Physiological Adaptation). The student will be able to:
	15.01 Calculate and monitor intravenous (IV) flow rate.
	15.02 Administer intravenous hydrating fluids.
	15.03 Perform a venipuncture for blood draws.
	15.04 Insert, maintain, and remove a peripheral intravenous (IV) catheter.
	15.05 Maintain a central venous catheter.
	15.06 Administer intravenous piggyback (secondary) medications.
	15.07 Maintain pain control devices (epidural, patient-controlled analgesia, peripheral nerve catheter).
	15.08 Monitor transfusion of blood product.
16.0	Interpret evidence-based practice to provide health awareness in community settings (Reduction of Risk Potential). The student will be able to:

16.01	Participate in health screenings or health promotion programs.
16.02	Identify community resources for clients.

Course Number: PRN0290 Occupational Completion Point: B Practical Nursing (PN) Medical Surgical 1 – 300 Hours	
01.0	Integrated Processes – Apply the following fundamental integrated processes to the practice of practical nursing and integrate them throughout the Client Needs categories and subcategories in every course of the program **(See Client Needs categories from NCSBN, 2023). This standard is part of EVERY course in the Practical Nursing program.** The student will be able to show:
01.01	Caring – Interaction of the practical nurse and client in an atmosphere of mutual respect and trust. In this collaborative environment, the practical nurse provides support and compassion to help achieve desired therapeutic outcomes.
01.02	Clinical judgment – The observed outcome of critical thinking and decision-making. It is an iterative process that uses nursing knowledge to observe and assess presenting situations, identify a prioritized client concern and generate the best possible evidence-based solutions in order to deliver safe client care. The six clinical judgment functions include: recognizing cues, analyzing cues, prioritizing and hypothesizing, generating solutions, taking action, and evaluating outcomes.
01.03	Client problem-solving process (nursing process) – A scientific approach to client care that includes data collection, planning, implementation, and evaluation.
01.04	Communication and documentation – Verbal and nonverbal interactions between the practical nurse and the client, as well as other members of the healthcare team. Events and activities associated with client care are validated in written and/or electronic records that reflect standards of practice and accountability in the provision of care.
01.05	Culture and spirituality – Interaction of the nurse and the client (individual, family or group, including significant others, and population) that recognizes and considers the client-reported, self-identified, unique and individual preferences to client care, the applicable standard of care, and legal considerations.
01.06	Teaching and learning – Facilitation of the acquisition of knowledge, skills, and attitudes (KSAs) to assist in promoting a change in behavior.
01.07	Professionalism, respect, and civility toward clients and colleagues in all educational and practice settings.
01.08	Application of a self-care plan, including the demonstration of healthy lifestyle choices and personal health maintenance.
01.09	A demonstration of nursing care in clinical experiences, simulation, or skills lab of at least ___ hours.
17.0	Demonstrate the use of clinical judgment to care for pre-operative and post-operative clients (Reduction of Risk Potential, Physiological Adaptation). The student will be able to:
17.01	Assist with care for the client before and after a surgical procedure.
17.02	Provide care for a client with a fluid and electrolyte imbalance.
17.03	Remove wound sutures or staples.
17.04	Assist with the client's wound drainage device removal.

18.0	Demonstrate the use of clinical judgment to care for a medical surgical client (MS1: cardiovascular/circulatory, respiratory, lymphatic/immune, musculoskeletal, endocrine, integumentary/sensory systems) (Reduction of Risk Potential, Physiological Adaptation). The student will be able to:
18.01	Identify signs and symptoms related to acute or chronic diseases or disorders.
18.02	Use data from various credible sources in making clinical decisions.
18.03	Apply evidence-based practice when providing care.
18.04	Recognize and report a change in the client's condition.
18.05	Reinforce education to the client regarding the client's care and condition.
18.06	Provide care for clients with diseases and disorders from the following body systems including medications and nutritional needs:
•	Cardiovascular/circulatory system
○	Perform an electrocardiogram (EKG/ECG).
○	Recognize and report basic abnormalities on a client cardiac monitor strip.
○	Assist in the care of a client with a pacing device.
•	Respiratory system
○	Provide care for a client with a tracheostomy.
○	Provide care to a client on a ventilator.
•	Lymphatic/immune systems
•	Musculoskeletal systems
•	Endocrine system
•	Integumentary/sensory systems

Course Number: PRN0291 **Occupational Completion Point: B** **Practical Nursing (PN) Medical Surgical 2 – 300 Hours**	
01.0	Integrated Processes – Apply the following fundamental integrated processes to the practice of practical nursing and integrate them throughout the Client Needs categories and subcategories in every course of the program **(See Client Needs categories from NCSBN, 2023). This standard is part of EVERY course in the Practical Nursing program.** The student will be able to show:

01.01	Caring – Interaction of the practical nurse and client in an atmosphere of mutual respect and trust. In this collaborative environment, the practical nurse provides support and compassion to help achieve desired therapeutic outcomes.
01.02	Clinical judgment – The observed outcome of critical thinking and decision-making. It is an iterative process that uses nursing knowledge to observe and assess presenting situations, identify a prioritized client concern and generate the best possible evidence-based solutions in order to deliver safe client care. The six clinical judgment functions include: recognizing cues, analyzing cues, prioritizing and hypothesizing, generating solutions, taking action, and evaluating outcomes.
01.03	Client problem-solving process (nursing process) – A scientific approach to client care that includes data collection, planning, implementation, and evaluation.
01.04	Communication and documentation – Verbal and nonverbal interactions between the practical nurse and the client, as well as other members of the healthcare team. Events and activities associated with client care are validated in written and/or electronic records that reflect standards of practice and accountability in the provision of care.
01.05	Culture and spirituality – Interaction of the nurse and the client (individual, family or group, including significant others, and population) that recognizes and considers the client-reported, self-identified, unique and individual preferences to client care, the applicable standard of care, and legal considerations.
01.06	Teaching and learning – Facilitation of the acquisition of knowledge, skills, and attitudes (KSAs) to assist in promoting a change in behavior.
01.07	Professionalism, respect, and civility toward clients and colleagues in all educational and practice settings.
01.08	Application of a self-care plan, including the demonstration of healthy lifestyle choices and personal health maintenance.
01.09	A demonstration of nursing care in clinical experiences, simulation, or skills lab of at least ___ hours.
19.0	Demonstrate the use of clinical judgment to care for a medical surgical client (MS2: gastrointestinal, neurological, urinary, reproductive, oncologic) (Reduction of Risk Potential, Physiological Adaptation). The student will be able to:
19.01	Identify signs and symptoms related to acute or chronic diseases or disorders.
19.02	Use data from various credible sources in making clinical decisions.
19.03	Apply evidence-based practice when providing care.
19.04	Recognize and report a change in the client's condition.
19.05	Reinforce education to the client regarding the client's care and condition.
19.06	Provide care for clients with diseases and disorders from the following body systems, including medications and nutritional needs:
	• Gastrointestinal system
	○ Monitor continuous or intermittent suction of the nasogastric (NG) tube.
	• Neurological system
	• Urinary system

○ Check for urinary retention (bladder scan, palpation).
○ Provide care for a client receiving peritoneal dialysis or hemodialysis.
• Reproductive system
• Oncologic

Course Number: PRN0690 **Occupational Completion Point: B** **Practical Nursing (PN) Transition to Practice – 150 Hours**	
01.0	Integrated Processes – Apply the following fundamental integrated processes to the practice of practical nursing and integrate them throughout the Client Needs categories and subcategories in every course of the program **(See Client Needs categories from NCSBN, 2023). This standard is part of EVERY course in the Practical Nursing program.** The student will be able to show:
01.01	Caring – Interaction of the practical nurse and client in an atmosphere of mutual respect and trust. In this collaborative environment, the practical nurse provides support and compassion to help achieve desired therapeutic outcomes.
01.02	Clinical judgment – The observed outcome of critical thinking and decision-making. It is an iterative process that uses nursing knowledge to observe and assess presenting situations, identify a prioritized client concern and generate the best possible evidence-based solutions in order to deliver safe client care. The six clinical judgment functions include: recognizing cues, analyzing cues, prioritizing and hypothesizing, generating solutions, taking action, and evaluating outcomes.
01.03	Client problem-solving process (nursing process) – A scientific approach to client care that includes data collection, planning, implementation, and evaluation.
01.04	Communication and documentation – Verbal and nonverbal interactions between the practical nurse and the client, as well as other members of the healthcare team. Events and activities associated with client care are validated in written and/or electronic records that reflect standards of practice and accountability in the provision of care.
01.05	Culture and spirituality – Interaction of the nurse and the client (individual, family or group, including significant others, and population) that recognizes and considers the client-reported, self-identified, unique and individual preferences to client care, the applicable standard of care, and legal considerations.
01.06	Teaching and learning – Facilitation of the acquisition of knowledge, skills, and attitudes (KSAs) to assist in promoting a change in behavior.
01.07	Professionalism, respect, and civility toward clients and colleagues in all educational and practice settings.
01.08	Application of a self-care plan, including the demonstration of healthy lifestyle choices and personal health maintenance.
01.09	A demonstration of nursing care in clinical experiences, simulation, or skills lab of at least ___ hours.
20.0	Demonstrate the use of clinical judgment to care for an obstetric or maternal/newborn client needing intrapartum care (Health Promotion and Maintenance, Reduction of Risk Potential, Physiological Adaptation, Coordinated Care). The student will be able to:
20.01	Identify signs and symptoms related to intrapartum care.
20.02	Use data from various credible sources in making clinical decisions.

	20.03 Apply evidence-based practice when providing care.
	20.04 Recognize and report changes in a client's condition.
	20.05 Reinforce education to the client regarding the client's care and condition.
	20.06 Initiate and participate in security alerts (infant abduction).
	20.07 Provide care for a client needing intrapartum care.
	20.08 Assist with care for the antepartum client.
	20.09 Identify signs or symptoms of potential prenatal complications.
	20.10 Assist with monitoring a client in labor.
	20.11 Monitor recovery of the stable postpartum and newborn client.
21.0	Demonstrate the use of clinical judgment to care for a pediatric client with the following diseases or disorders, including SIDS/SUIDS (Health Promotion and Maintenance, Reduction of Risk Potential, Physiological Adaptation, Coordinated Care). The student will be able to:
	21.01 Identify signs and symptoms related to acute or chronic pediatric diseases or disorders.
	21.02 Use data from various credible sources in making clinical decisions.
	21.03 Apply evidence-based practice when providing care.
	21.04 Recognize and report changes in the client's condition.
	21.05 Reinforce education to the client and family regarding the client's care, condition, and safety.
	21.06 Provide care for a pediatric client.
	21.07 Identify clients in need of immunizations.
22.0	Demonstrate the use of evidence-based practice and readiness for safe transition to nursing practice. The student will be able to:
	22.01 Prepare an NCLEX-PN study plan to provide guidance for licensure application.
	22.02 Prepare a resume and portfolio.
	22.03 Apply employability skills and make appropriate employer connections for potential career opportunities.
	22.04 Apply clinical judgment through the care of clients in a clinical setting (could be a preceptorship).
	22.05 Describe the Florida Board of Nursing requirements for licensure renewal, including multi-state license.

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as, experimental, quality, and safety procedures are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate, and troubleshoot equipment/tools used to make observations. Students understand measurement error; and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

Special Notes

This program meets the Department of Health's education requirements for Florida Board of Nursing licensure renewal requirements. Although not a requirement for initial licensure, it is a requirement for renewal; therefore, the instructor **may** provide a certificate for renewal purposes to the student verifying these requirements have been met.

If students in this program are seeking a licensure, certificate, or registration through the Department of Health, please refer to 456.0635, F.S. for more information on disqualification for a license, certificate, or registration through the Department of Health.

This program focuses on broad, transferable skills and stresses understanding and demonstration of the following elements of the health care industry; planning, management, finance, technical and production skills, underlying principles of technology, labor issues, community issues and health, safety, and environmental issues.

Career and Technical Student Organization (CTSO)

CTSOs are co-curricular career and technical student organizations providing leadership training and reinforcing specific career and technical skills. Career and Technical Student Organizations provide activities for students as an integral part of the instruction offered. Other CTSOs not listed in this curriculum framework or recognized by the Florida Department of Education are permissible provided they support student mastery over the standards and benchmarks of this curriculum framework.

Cooperative Training – OJT

On-the-job training is appropriate but not required for this program. Whenever offered, the rules, guidelines, and requirements specified in the OJT framework apply.

Basic Skills

In Career Certificate programs offered for 450 hours or more, in accordance with Rule 6A-10.040, F.A.C., the minimum basic skills grade levels required for postsecondary adult career and technical students to complete this program are: Computation (Mathematics) 11 and Communications (Reading and Language Arts) 11. These grade level numbers correspond to a grade equivalent score obtained on a state designated basic skills examination.

Adult students with disabilities, as defined in s. 1004.02, F.S., may be exempted from meeting the Basic Skills requirements (Rule 6A-10.040, F.A.C.). Students served in exceptional student education (except gifted) as defined in s. 1003.01, F.S., may also be exempted from meeting the Basic Skills requirement. Each school district and Florida College System Institution must adopt a policy addressing procedures for exempting eligible students with disabilities from the Basic Skills requirement as permitted in s. 1004.91, F.S.

Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments, assessments, time demands and schedules, learning environment, assistive technology, and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

Note: Postsecondary curriculum and regulated secondary programs cannot be modified.

Florida Department of Education
Curriculum Framework

Program Title: **Professional Nursing (LPN-RN)**
Program Type: **Career Preparatory**
Career Cluster: **Health Science**

Career Certificate Program		
Program Number	H170608	
CIP Number	0351380102	
Grade Level	30, 31	
Program Length	900 hours	
Teacher Certification	Refer to the **Program Structure** section.	
CTSO	HOSA	
SOC Codes (all applicable)	For program SOC codes, please see the Program and Course Tables section of the CTE Program Resources page linked below.	
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml	
Basic Skills Level	Computation (Mathematics): 11	Communications (Reading and Language Arts): 11

Purpose

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Health Science career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of the Health Science career cluster.

This program is designed to prepare students who currently hold a valid, unencumbered Licensed Practical Nurse (LPN) license issued by the Florida Board of Nursing, for employment as Registered Nurses (RN). The program must be approved by the Florida Board of Nursing in order for graduates to apply and take the examination to practice as Registered Nurses.

The content follows section (s.) 464.019, Florida Statutes (F.S.) and includes but is not limited to: the professional role of the registered nurse, the legal scope of practice both in theoretical instruction and clinical experience, instruction in body structure and function; acute, long-term care, and community settings in the areas of geriatric, psychiatric, medical, surgical, pediatric, obstetric, and professional nursing; pharmacology, administering medications; mental health, interpersonal and personal relationship skills, health teaching, counseling skills, human growth and development over the lifespan, nutrition, family, and professional nursing.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Program Structure

This program is a planned sequence of instruction consisting of 900 clock hours taking 52 weeks and one occupational completion point.

This program is comprised of a newly designed integrated pathway of nursing education called the Professional Nursing (LPN-RN) program. It serves as a dedicated bridge for Licensed Practical Nurses (LPNs) transitioning to Registered Nurses (RNs) through an accelerated hybrid delivery method. The program is structured to meet the requirements of the Florida Board of Nursing and complies with statutory regulations.

The design incorporates various learning strategies, considering the Patricia Benner framework of "Novice to Expert," the American Nurses Association (ANA) Scope of Practice (2023), the Quality and Safety Education for Nurses (QSEN) Competencies (2017), and the National Council of State Boards of Nursing (NCSBN) RN Practice Analysis and Activity Statements (2021) and Test Plan (2023), which prepare students for the Next Generation NCLEX-RN test. Additionally, it aligns with the National League for Nursing (NLN) Competencies and the Hallmarks of Excellence in Nursing Education Model (2020). The program is also designed to meet the standards of accrediting agencies recognized by the Florida Board of Nursing, as specified in Section 464.019(11) of the Florida Statutes: (http://www.leg.state.fl.us/statutes/index.cfm?App_mode=Display_Statute&Search_String=&URL=0400-0499/0464/Sections/0464.019.html). Bloom's Multiple Domains of Learning—cognitive, affective, and psychomotor—are also utilized within the curriculum.

The program facilitates the stacking of credentials from nursing assistant to practical nursing and ultimately to professional nursing. It employs scaffolded nursing education, promoting the development of higher-order thinking skills, particularly in clinical judgment, using the NCSBN's Clinical Judgment Measurement Model (2019). This comprehensive program covers a wide range of content and concepts necessary for providing excellent nursing care at the level expected from a professional nurse.

This program is comprised of courses which have been assigned course numbers in the SCNS (Statewide Course Numbering System) in accordance with section (s.) 1007.24(1), Florida Statutes (F.S.). They include curriculum and an organizational structure designed specifically for this fifty-two-week Professional Nursing (LPN-RN) program designed to bridge LPN to RN students in an accelerated hybrid format. Only nurses who hold a current, valid, unencumbered Licensed Practical Nurse (LPN) license issued by the Florida Board of Nursing may be accepted into the program. Career and Technical credit shall be awarded to the student on a transcript in accordance with s.1001.44(3)(b), F.S.

To teach the course(s) listed below, instructors must hold all of the teacher certifications indicated for that course. In addition, according to s. 464.019, F.S. at least 50% of the faculty must hold a Master in Nursing degree or higher.

The following table illustrates the postsecondary program structure:

OCP	Course Number	Course Title	Teacher Certification	Length
	NSG0080	Nursing Transitions	REG NURSE 7 G**	111 hours
	NSG0081	Concepts of Geriatrics and Pharmacology in Nursing		102 hours
	NSG0082	Psychiatric Nursing		102 hours

OCP	Course Number	Course Title	Teacher Certification	Length
	NSG0083	Medical Nursing		102 hours
	NSG0084	Surgical Nursing		102 hours
	NSG0085	Pediatric Nursing		102 hours
	NSG0086	Obstetric Nursing		102 hours
	NSG0087	Professional Nursing		91 hours
A*	NSG0089	Senior Practicum Intensive		86 hours

* OCP A is awarded after the student successfully completes all 9 courses in the program.
** Registered Nurse who holds at least a BSN and an unencumbered RN license in the state of Florida or from an Enhanced Nursing Licensure Compact (ENLC) state.

National Standards (NS)

Programs identified as having Industry or National Standards have been crosswalked with the corresponding standards and/or benchmarks. Industry or National Standards for the Professional Nursing (LPN-RN) program can be found using the following link for the National Council of State Boards of Nursing (NCSBN), which includes the current test plan:
https://www.ncsbn.org/public-files/2023_RN_Test%20Plan_English_FINAL.pdf

Regulated Programs

The Professional Nursing (LPN-RN) program is a program that is regulated by the Florida Board of Nursing requirements for the professional nurse under the Nurse Practice Act and the Administrative Code. Refer to s. 464.019(1)(b), F.S. for faculty credential requirements to teach this program. Programs must comply with the Florida Board of Nursing rules, including faculty qualifications. For questions regarding this process, contact the Florida Board of Nursing, at 4052 Bald Cypress Way, Tallahassee, FL 32399-3752.

According to the National Council of State Boards of Nursing (NCSBN), students are eligible to apply to take the National Council Licensure Examination for Registered Nurses (NCLEX) RN after satisfactory completion of an approved program. The NCLEX-RN uses computerized adaptive testing (CAT) that the nursing graduate must take and pass in order to practice as a Registered Nurse (RN). Once a program has been approved by the Florida Board of Nursing as a Professional Nursing (LPN-RN) program, an NCSBN NCLEX-RN code will be issued to the school. This code is used by students to apply for the NCLEX-RN.

Human Trafficking Course – SB 340 NCLEX Requirement – Effective July 1, 2027

Graduates of Florida-approved **Practical Nursing (LPN) and Registered Nursing (RN) programs** applying for initial Florida licensure by examination must complete a **two-hour Human Trafficking course after graduation and prior to taking the NCLEX**, as required by **s. 464.008(1)(e), F.S.**

The course must contain the content required for the Human Trafficking continuing education course pursuant to **s. 464.013(3)(c), F.S.**

Human Trafficking Course Requirements and Resources: Registered Nurse (RN) Renewal – Continuing Education Requirements

This course is currently identified by the course provider as a two-hour Florida Human Trafficking course that meets the content standard for initial licensure under **s. 464.008, F.S., as amended by SB 340**, and the requirements of **s. 464.013(3)(c), F.S.** The course is offered online and provides a certificate of completion. Because students completing the course prior to initial licensure may not yet have a Florida nursing license or an active CE Broker account, each student is responsible for **downloading, retaining, and safeguarding the certificate of completion** as documentation of course completion.

Implementation: Nursing programs should notify students prior to graduation that the two-hour Human Trafficking course is a **post-graduation, pre-NCLEX requirement**. Graduates should complete the course, retain documentation of successful completion, and follow the current Florida Board of Nursing and Florida Department of Health requirements for verification and NCLEX eligibility.
Statutory Authority: Section 464.008(1)(e), Florida Statutes; Section 464.013(3)(c), Florida Statutes; CS/SB 340 (2026), Chapter 2026-82.

Clinical instruction of nursing students will meet the requirements of s. 464.019, F.S. Clinical experience must make up at least 50% of the total program. Simulated practice and clinical experiences are included as an integral part of this program. Clinical simulation may be used for no more than 50% of the total clinical experience.

Florida's Career Readiness Skills for CTE Programs

Employability Skills	
01.0	Apply academic skills to workplace scenarios.
	01.01 Use reading skills.
	01.02 Use writing skills.
	01.03 Use mathematical strategies and procedures.
	01.04 Use scientific principles and procedures.
02.0	Design a solution to an industry problem.
	02.01 Use critical thinking.
	02.02 Use creativity.
	02.03 Make sound decisions.
	02.04 Solve problems.
	02.05 Reason.
	02.06 Plan and organize.
03.0	Manage resources within an industry project
	03.01 Manage time.
	03.02 Manage money or resources.
	03.03 Manage materials.
	03.04 Manage personnel.
04.0	Oversee the subcomponents, operations and output of a technical or organizational system.
	04.01 Manage systems.
	04.02 Monitor systems.
	04.03 Improve systems.
05.0	Use information for decision making.
	05.01 Locate information.
	05.02 Organize information.
	05.03 Use information.

	05.04 Analyze information.
	05.05 Communicate information.
06.0	Apply relevant technology to workplace scenarios to aid productivity.
	06.01 Use technology.
07.0	Interpret and express interpersonal communication.
	07.01 Communicate verbally.
	07.02 Listen actively.
	07.03 Comprehend written material.
	07.04 Convey information in writing.
	07.05 Communicate nonverbally.
	07.06 Interpret nonverbal communication.
08.0	Interact with others to accomplish workplace goals.
	08.01 Collaborate with others in a team.
	08.02 Respond to customer needs.
	08.03 Exercise leadership.
	08.04 Negotiate to resolve conflict.
	08.05 Respect others.
09.0	Manage personal behavior to maximize productivity and professional growth.
	09.01 Demonstrate responsibility and self-discipline.
	09.02 Adapt and show flexibility.
	09.03 Work independently.
	09.04 Demonstrate a willingness to learn.
	09.05 Demonstrate integrity.
	09.06 Demonstrate professionalism.
	09.07 Take initiative.
	09.08 Display positive attitude.
	09.09 Take responsibility for professional growth.

Job Attainment	
10.0	Find, assess and apply to job opportunities.
10.01	Identify online job posts relevant to his or her career aspirations.
10.02	Compare and contrast the job posts' required qualifications, job duties, compensation, benefits and employers.
10.03	Define what information, documentation and writing prompts are required for the positions.
11.0	Communicate personal competence, character and fit for a job opportunity.
11.01	Develop a resume.
11.02	Write a cover letter.
11.03	Curate a professional portfolio that includes work products.
11.04	Prepare for and experience a mock job interview.
12.0	Cultivate and leverage relationships to professionally advance.
12.01	Request a signed reference letter, letter of recommendation and/or an online skill/professionalism endorsement.
12.02	Develop a plan to cultivate a professional digital footprint.
12.03	Develop a networking plan for a specific industry of interest.

Standards

Prerequisite Requirement: Student must hold a current, valid, unencumbered LPN license issued by the Florida Board of Nursing to enter and remain in the Professional Nursing (LPN-RN) program.

After successfully completing this program, the student will be able to perform the following:

01.0 Thinking: Apply the clinical judgment measurement model thinking processes to all class content and clinical client situations, covering novice to advanced beginner health and illness concepts or content in preparation for meeting the Next Generation NCLEX-RN requirements starting in 2023. **(Note: Thinking is the first standard for each course or subject area.)**

02.0 Professional Behavior: Professional behavior will be demonstrated through communication, ethics, employability, safety, legal aspects, respectful and equitable practice, informatics, body structure and function review, assessment review, nursing process, electronic health record training, and orientation to the clinical facility.

03.0 Teamwork and Collaboration: Work well with a team including interprofessional collaboration, medication administration, pharmacology, human growth and development of the older adult, advocacy, evidence-based practice (EBP), client-centered care, and experiences in geriatrics, rehab, and/or long-term care.

04.0 Health Promotion: Promote well-being including mental health concepts, therapeutic communication, interpersonal and personal skills, relationship and counseling skills, as well as clinical opportunities in psychiatric inpatient and community health.

05.0 Coordination of Care: Provide appropriate planning skills to understand and apply principles of human growth and development for the adult, scholarly inquiry, and resource stewardship in the general medicine setting of clients.

06.0 Health Teaching: Demonstrate the use of teaching and learning principles for the education of the perioperative client and focus on the safe care of this client across the perioperative clinical setting.

07.0 Quality of Practice: Exhibit quality improvement (QI) principles, human growth and development of the child, and care for the client in a children's hospital setting or children's specialty area.

08.0 Environmental Health: Plan for a positive environment in the care of the family including proper nutrition, human growth and development of the perinatal clients, and clinical experiences in labor and delivery, OB OR, mom/baby units, and/or the outpatient family health clinic setting.

09.0 Professional Role: Function in the professional role of the nurse including licensure preparation and leadership roles including clinical care in specialty areas such as emergency rooms, intensive care units, and step-down areas.

10.0 Professional Practice: Create a pattern of professional practice through a senior practicum intensive with a 1:1 preceptor in the acute clinical setting for a minimum of seventy-two hours, as well as a reflection of clinical judgment opportunities, use of self-evaluation, and application of life-long learning principles to show preparation for the NCLEX-RN examination.

Florida Department of Education
Student Performance Standards

Program Title: Professional Nursing (LPN-RN)
Career Certificate Program Number: H170608

NOTE: All courses must follow in the designated order after successful completion of the previous course in class and clinical with a passing grade. All standards and benchmarks are related to requirements for the professional nurse according to the Florida Board of Nursing and the Nurse Practice Act, s. 464.019, F.S., and other nursing entities.

Course Number: NSG0080 **Nursing Transitions – 111 Hours**	
Anatomy and Physiology and the Respiratory System.	
01.0	Thinking: Apply the clinical judgment measurement model thinking processes to all class content and clinical client situations, covering novice to advanced beginner health and illness concepts or content in preparation for meeting the Next Generation NCLEX-RN requirements starting in 2023 (FBON, NCSBN). **(Note: Thinking is the first standard for each course or subject area.)**
02.0	Professional Behavior: Professional behavior will be demonstrated through communication, ethics, employability, safety, legal aspects, respectful and equitable practice, informatics, body structure and function review, assessment review, nursing process, electronic health record training, and orientation to the clinical facility (ANA 1-6).
02.01	Communication: Establish excellent communication skills with team members and clients, using technology and appropriate spoken and written English skills (APA 7th edition, 2020 update) to plan, implement, and manage client care (ANA 10).
02.02	Ethics: List ethical principles to guide interpersonal relationships, professional behavior, and clinical decision-making and show evidence of implementing these principles (ANA 7).
02.03	Employability: Demonstrate competencies in professional behavior, good moral character, respect, and employability skills.
02.04	Safety: Apply safe use of information, equipment, supplies, ergonomics, and attention to detail while practicing and providing care (QSEN 5).
02.05	Legal Aspects: Examine the legal scope and practice transitioning from the role of LPN to the professional nurse in theoretical instruction and clinical practice experience.
02.06	Respectful and Equitable Practice: Implement consistent respectful and equitable practice, using principles of team civility to inspire a well-loved practice environment (ANA 9).
02.07	Informatics: Use collected data to direct practice decisions and document accurately (QSEN 6).
02.08	Body Structure and Function (BSF) Review: Adapt concepts of anatomy and physiology or body structure and function (BSF) as the foundational blocks of the professional nurse.
02.09	Assessment Review (clinical): Demonstrate holistic assessment skills for head-to-toe assessments in order to plan, prioritize, implement, and evaluate care.
02.10	Nursing Process (clinical): Improve higher order thinking skills to apply the nursing process, critical thinking, clinical reasoning, and clinical judgment to foundational thinking and clinical applications.

02.11	Clinical – Electronic Health Record (EHR) Training and Orientation [acute]: Integrate client assessments, nursing process, and technology to provide and document care that focuses on the professional behavior of the nursing student.

Course Number: NSG0081 **Concepts of Geriatrics and Pharmacology in Nursing – 102 Hours**	
Pharmacology, Geriatrics, and the Endocrine System.	
01.0	Thinking: Apply the clinical judgment measurement model thinking processes to all class content and clinical client situations, covering novice to advanced beginner health and illness concepts or content in preparation for meeting the Next Generation NCLEX-RN requirements starting in 2023 (FBON, NCSBN). **(Note: Thinking is the first standard for each course or subject area.)**
03.0	Teamwork and Collaboration: Work well with a team including interprofessional collaboration, medication administration, pharmacology, human growth and development of the older adult, advocacy, evidence-based practice (EBP), client-centered care, and experiences in geriatrics, rehab, and/or long-term care.
03.01	Collaboration: Advocate for teamwork and collaboration in the classroom, online, and in the clinical setting (QSEN 2, ANA 11).
03.02	Medication Administration (clinical): Administer ordered medication through various routes within the scope of practice using principles of safety (National Patient Safety Goals), infection control, accuracy in clinical calculations, and integrity.
03.03	Pharmacology: Apply principles of pharmacology to evaluate the appropriateness of ordered medications and treatments for the current client's health status
03.04	Human Growth and Development for the Older Adult: Compare human growth and development throughout the lifespan and its impact on nursing care with a focus on the older adult client.
03.05	Advocacy: Identify client rights, diverse preferences, and choices, and provide care honoring and respecting the client with dignity (ANA 8).
03.06	Evidence-based Practice (EBP): Prioritize statistics and research to choose evidence-based (EBP) and best practices in professional nursing (QSEN 3).
03.07	Client-Centered Care (clinical): Provide client-centered care recognizing diverse cultures and ethnic backgrounds in acute, long-term care, and community settings (QSEN 1 – modified).
03.08	Clinical – Geriatrics, Rehab, and/or Long-term Care Centers: Provide culturally competent client-centered care integrating the nursing process, clinical judgment, and safety at the beginning level of the novice student professional nurse who is focusing on teamwork and collaboration.

Course Number: NSG0082 **Psychiatric Nursing – 102 Hours**	
Mental Health and the Neurological System.	
01.0	Thinking: Apply the clinical judgment measurement model thinking processes to all class content and clinical client situations, covering novice to advanced beginner health and illness concepts or content in preparation for meeting the Next Generation NCLEX-RN requirements starting in 2023 (FBON, NCSBN). **(Note: Thinking is the first standard for each course or subject area.)**
04.0	Health Promotion: Promote well-being including mental health concepts, therapeutic communication, interpersonal and personal skills, relationship and counseling skills, as well as clinical opportunities in psychiatric inpatient and community health.

04.01	Mental Health Concepts: Apply concepts of psychiatric nursing and the mental health and illness continuum.
04.02	Therapeutic Communication (clinical): Demonstrate the use of therapeutic communication with clients in simulated and practice settings.
04.03	Interpersonal/Personal Skills: Establish positive interpersonal skills and personal support systems (ANA 5B).
04.04	Relationship/Counseling Skills: Improve relationship and counseling skills.
04.05	Clinical – Psychiatric Inpatient and Community Health: Provide culturally competent client-centered care integrating the nursing process, clinical judgment, and safety at the beginning level of the novice student professional nurse who is focusing on health promotion.

Course Number: NSG0083 **Medical Nursing – 102 Hours**	
Pathophysiology, Diseases/Disorders, Complications, and the Cardiac and Hematologic Systems.	
01.0	Thinking: Apply the clinical judgment measurement model thinking processes to all class content and clinical client situations, covering novice to advanced beginner health and illness concepts or content in preparation for meeting the Next Generation NCLEX-RN requirements starting in 2023 (FBON, NCSBN). **(Note: Thinking is the first standard for each course or subject area.)**
05.0	Coordination of Care: Provide appropriate planning skills to understand and apply principles of human growth and development for the adult, scholarly inquiry, and resource stewardship in the general medicine setting of clients
05.01	Coordination of Care: Create workflow patterns to provide efficiency in the care of multiple clients and use prioritizing frameworks to determine priorities of care.
05.02	Human Growth and Development for the Adult: Apply principles of adult medical nursing focusing on growth and development, pathophysiology, diseases, disorders, complications, and management of care (ANA 5A).
05.03	Scholarly Inquiry: Analyze scholarly works to provide best practices for client care (ANA 14).
05.04	Resource Stewardship: Select resources being mindful of both exemplary care and cost containment (ANA 17).
05.05	Clinical – General Medicine: Provide culturally competent client-centered care integrating the nursing process, clinical judgment, and safety at the middle level of the novice student professional nurse who is focusing on coordination of care.

Course Number: NSG0084 **Surgical Nursing – 102 Hours**	
Pre-op and Post-op, Fluid and Electrolytes, Acid-base Balance, Infection, and the Musculoskeletal and Integumentary Systems.	
01.0	Thinking: Apply the clinical judgment measurement model thinking processes to all class content and clinical client situations, covering novice to advanced beginner health and illness concepts or content in preparation for meeting the Next Generation NCLEX-RN requirements starting in 2023 (FBON, NCSBN). **(Note: Thinking is the first standard for each course or subject area.)**
06.0	Health Teaching: Demonstrate the use of teaching and learning principles for the education of the perioperative client and focus on the safe care of this client across the perioperative clinical setting.
06.01	Health Teaching: Evaluate barriers to client learning and plan support to assist in learning keeping in mind the principles of learning for the adult client.

06.02	Education: Apply principles of adult surgical nursing focusing on teaching and learning opportunities in the perioperative client with body imbalances and maintaining homeostasis. Also, promote life-long learning for the professional nurse (ANA 5A, 13).
06.03	Clinical – OR, Pre-op, PACU, Post-op, Surgical Floor: Provide culturally competent client-centered care integrating the nursing process, clinical judgment, and safety at the middle level of the novice student professional nurse who is focusing on health teaching by organizing peri-operative nursing interventions with a priority mindset including awareness of potential complications.

Course Number: NSG0085 Pediatric Nursing – 102 Hours	
Human Growth and Development, and the Immune, Lymph, and Gastrointestinal Systems.	
01.0	Thinking: Apply the clinical judgment measurement model thinking processes to all class content and clinical client situations, covering novice to advanced beginner health and illness concepts or content in preparation for meeting the Next Generation NCLEX-RN requirements starting in 2023 (FBON, NCSBN). **(Note: Thinking is the first standard for each course or subject area.)**
07.0	Quality of Practice: Exhibit quality improvement (QI) principles, human growth and development of the child, and care for the client in a children's hospital setting or children's specialty area.
07.01	Quality of Practice: Use self-evaluation and peer evaluation to complete a reality check for quality in practice.
07.02	Quality Improvement (QI): Investigate a potential area of concern in pediatric practices to provide safer care or improvement (ANA 15, QSEN 4).
07.03	Human Growth and Development of the Child: Compare human growth and development throughout the lifespan and its impact on nursing care with a focus on the infant and child client.
07.04	Clinical – Children's Hospital, NICU, Outpatient Pediatrics: Provide culturally competent client-centered care integrating the nursing process, clinical judgment, and safety at the middle level of the novice student professional nurse who is focusing on the quality of practice.

Course Number: NSG0086 Obstetric Nursing – 102 Hours	
Family and the Reproductive and Genitourinary Systems.	
01.0	Thinking: Apply the clinical judgment measurement model thinking processes to all class content and clinical client situations, covering novice to advanced beginner health and illness concepts or content in preparation for meeting the Next Generation NCLEX-RN requirements starting in 2023 (FBON, NCSBN). **(Note: Thinking is the first standard for each course or subject area.)**
08.0	Environmental Health: Plan for a positive environment in the care of the family including proper nutrition, human growth and development of the perinatal clients, and clinical experiences in labor and delivery, OB OR, mom/baby units, and/or the outpatient family health clinic setting.
08.01	Environmental Health: Describe an environmental threat to human life and propose a realistic solution to decrease the threat or resolve the issue.
08.02	Family: Design ways to be active in environmental health that have a positive outcome on family health (ANA 18).
08.03	Nutrition: Integrate concepts of nutrition and wellness over the lifespan.

08.04	Human Growth and Development of the Perinatal Patient: Compare human growth and development throughout the lifespan and its impact on nursing care with a focus on the perinatal and newborn clients.
08.05	Clinical – Labor and Delivery, OB OR, Mom/Baby, and the Family Health Clinic Setting: Provide culturally competent client-centered care integrating the nursing process, clinical judgment, and safety at the advanced level of the novice student professional nurse who is focusing on environmental health and safety for mom and baby.

Course Number: NSG0087 **Professional Nursing – 91 Hours**	
Cancer, Emergencies, Leadership, and Licensure.	
01.0	Thinking: Apply the clinical judgment measurement model thinking processes to all class content and clinical client situations, covering novice to advanced beginner health and illness concepts or content in preparation for meeting the Next Generation NCLEX-RN requirements starting in 2023 (FBON, NCSBN). **(Note: Thinking is the first standard for each course or subject area.)**
09.0	Professional Role: Function in the professional role of the nurse including licensure preparation and leadership roles including clinical care in specialty areas such as emergency rooms, intensive care units, and step-down areas.
09.01	Functioning in the Professional Role: Demonstrate competencies in the core components of professional nursing including licensure preparation and continuing education requirements.
09.02	Leadership (clinical): Demonstrate leadership and delegation skills in care and current issues in nursing (ANA 12).
09.03	Clinical – Specialty Areas Including Emergency Room, Intensive Care Unit, Step-Down Unit, Etc.: Provide culturally competent client-centered care integrating the nursing process, clinical judgment, and safety at the advanced level of the student professional nurse who is focusing on the professional role.

Course Number: NSG0089 **Occupational Completion Point: A** **Senior Practicum Intensive – 86 Hours**	
01.0	Thinking: Apply the clinical judgment measurement model thinking processes to all class content and clinical client situations, covering novice to advanced beginner health and illness concepts or content in preparation for meeting the Next Generation NCLEX-RN requirements starting in 2023 (FBON, NCSBN). **(Note: Thinking is the first standard for each course or subject area.)**
10.0	Professional Practice: Create a pattern of professional practice through a senior practicum intensive with a 1:1 preceptor in the acute clinical setting for a minimum of seventy-two hours, as well as a reflection of clinical judgment opportunities, use of self-evaluation, and application of life-long learning principles to show preparation for the NCLEX-RN examination.
10.01	Professional Practice Evaluation (clinical): Examine professional nursing functions and compile reflections on clinical decision-making during senior practicum experiences in preparation for the NCLEX-RN examination and practice in real life (ANA 16).
10.02	NCLEX-RN Preparation: Provide documentation of a completed NLCEX-RN preparation course of at least eighteen hours and include an NCLEX-RN study journal.
10.03	Clinical Practicum – 1:1 with a Preceptor in the Acute Care Setting: Provide and coordinate care in the acute setting under the direct supervision of a clinical facility-approved preceptor, using self-evaluation to improve practice. The preceptor will provide feedback to improve practice (minimum two weeks or seventy-two practice hours).

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as, experimental, quality, and safety procedures are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate and troubleshoot equipment/tools used to make observations. Students understand measurement error; and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

Special Notes

Prerequisite Requirement: Student must hold a current, valid, unencumbered LPN license issued by the Florida Board of Nursing to enter and remain in the Professional Nursing (LPN-RN) program.

Career and Technical Student Organization (CTSO)

CTSOs are co-curricular career and technical student organizations providing leadership training and reinforcing specific career and technical skills. Career and Technical Student Organizations provide activities for students as an integral part of the instruction offered. Other CTSOs not listed in this curriculum framework or recognized by the Florida Department of Education are permissible provided they support student mastery over the standards and benchmarks of this curriculum framework.

Cooperative Training – OJT

On-the-job training is appropriate but not required for this program. Whenever offered, the rules, guidelines, and requirements specified in the OJT framework apply.

Basic Skills

In Career Certificate programs offered for 450 hours or more, in accordance with Rule 6A-10.040, F.A.C., the minimum basic skills grade levels required for postsecondary adult career and technical students to complete this program are: Computation (Mathematics) and Communications (Reading and Language Arts). These grade level numbers correspond to a grade equivalent score obtained on a state designated basic skills examination.

Adult students with disabilities, as defined in s.1004.02, F.S., may be exempted from meeting the Basic Skills requirements (Rule 6A-10.040, F.A.C.). Students served in exceptional student education (except gifted) as defined in s. 1003.01, F.S., may also be exempted from meeting the Basic Skills requirement. Each school district and Florida College System Institution must adopt a policy addressing procedures for exempting eligible students with disabilities from the Basic Skills requirement as permitted in s. 1004.91, F.S.

Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

Note: postsecondary curriculum and regulated secondary programs cannot be modified.

Florida Department of Education
Curriculum Framework

No new students may be enrolled in this program starting 2026-27. The last year to report any enrollment is 2027-28. This program was replaced by Nursing Assistant H700400 (0351390206).

Program Title: **Nursing Assistant (Articulated)**
Program Type: **Career Preparatory**
Career Cluster: **Health Science**

Career Certificate Program	
Program Number	H170690
CIP Number	0351390203
Grade Level	30, 31
Program Length	165 hours
Teacher Certification	Refer to the **Program Structure** section.
CTSO	HOSA
SOC Codes (all applicable)	For program SOC codes, please see the Program and Course Tables section of the CTE Program Resources page linked below.
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml
Basic Skills Level	N/A

Purpose

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Health Science career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of Health Science career cluster.

This program is designed to prepare students for employment as nursing assistants.

The content includes but is not limited to interpersonal skills, medical terminology, legal and ethical responsibilities, safe and efficient work, gerontology, nutrition, pet-facilitated therapy, health and safety including Cardio-pulmonary Resuscitation (CPR) – heart saver level, and employability skills.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Program Structure

This program is a planned sequence of instruction consisting of 2 occupational completion points.

This program is comprised of courses which have been assigned course numbers in the SCNS (Statewide Course Numbering System) in accordance with Section 1007.24 (1), F.S. Career and Technical credit shall be awarded to the student on a transcript in accordance with Section 1001.44(3) (b), F.S.

To teach the courses listed below, instructors must hold at least one of the teacher certifications indicated for that course.

The following table illustrates the postsecondary program structure:

OCP	Course Number	Course Title	Teacher Certification	Length
A	HSC0003	Basic Healthcare Worker	REG NURSE 7 G LPN 7 G* PRAC NURSE @7 %7%G (Must be a Registered Nurse)	90 hours
B	HCP0121	Nurse Aide and Orderly (Articulated)		75 hours

**** The LPN 7 G district issued certification is a practical nurse. A practical nurse can only be utilized as an instructor of the CNA training program when they are supervised by the program coordinator which must be a registered nurse. Please refer to 64B9-15.005, F.A.C., for requirements.***

Regulated Programs

Successful completion of this program from an approved school prepares the student for certification for employment as a Nursing Assistant, in accordance with Chapter 464.203, Florida Statutes (F.S.). To be approved, this program must be supervised by a registered nurse and follow the faculty qualifications set forth in 64B9-15.005(3)(a), F.A.C.

New programs must be approved by the Board of Nursing, Department of Health prior to enrolling students.

Those students who satisfactorily complete an approved course are eligible to apply to take the national nursing assistant examination being utilized in Florida, in accordance with Chapter 464.203, F.S. This program includes both Acute and Long Term Care.

In accordance with 64B9-15.005(4)(c), F.A.C., students will perform nursing skills in the clinical and simulated laboratory settings under the supervision of a qualified instructor. The clinical instruction ratio for program instructor to student is 1 to 15 for students caring directly for residents or clients.

In accordance with 64B9-15.006(2), F.A.C., The standardized curriculum shall require a minimum of 80 hours of classroom and 40 hours clinical instruction. The clinical instruction shall include at least 20 hours of long term care clinical instruction in a licensed nursing home

In accordance with 64B9-15.006(3), F.A.C., Prior to any direct contact with a resident, a training program shall require that a student receive a minimum of 16 hours of classroom instruction in communication and interpersonal skills; infection control; safety/emergency procedures, including the Heimlich maneuver; promoting residents' independence; and respecting residents' rights.

According to Section 400.211, F.S., persons who are enrolled in, or have completed, a state approved nursing assistant training program may be employed by a licensed nursing facility for a period of four months. However, the certification requirements must be met within four months of such initial employment.

Florida's Career Readiness Skills for CTE Programs

Employability Skills	
01.0	Apply academic skills to workplace scenarios.
01.01	Use reading skills.
01.02	Use writing skills.
01.03	Use mathematical strategies and procedures.
01.04	Use scientific principles and procedures.
02.0	Design a solution to an industry problem.
02.01	Use critical thinking.
02.02	Use creativity.
02.03	Make sound decisions.
02.04	Solve problems.
02.05	Reason.
02.06	Plan and organize.
03.0	Manage resources within an industry project
03.01	Manage time.
03.02	Manage money or resources.
03.03	Manage materials.
03.04	Manage personnel.
04.0	Oversee the subcomponents, operations and output of a technical or organizational system.
04.01	Manage systems.
04.02	Monitor systems.
04.03	Improve systems.
05.0	Use information for decision making.
05.01	Locate information.
05.02	Organize information.
05.03	Use information.

	05.04 Analyze information.
	05.05 Communicate information.
06.0	Apply relevant technology to workplace scenarios to aid productivity.
	06.01 Use technology.
07.0	Interpret and express interpersonal communication.
	07.01 Communicate verbally.
	07.02 Listen actively.
	07.03 Comprehend written material.
	07.04 Convey information in writing.
	07.05 Communicate nonverbally.
	07.06 Interpret nonverbal communication.
08.0	Interact with others to accomplish workplace goals.
	08.01 Collaborate with others in a team.
	08.02 Respond to customer needs.
	08.03 Exercise leadership.
	08.04 Negotiate to resolve conflict.
	08.05 Respect others.
09.0	Manage personal behavior to maximize productivity and professional growth.
	09.01 Demonstrate responsibility and self-discipline.
	09.02 Adapt and show flexibility.
	09.03 Work independently.
	09.04 Demonstrate a willingness to learn.
	09.05 Demonstrate integrity.
	09.06 Demonstrate professionalism.
	09.07 Take initiative.
	09.08 Display positive attitude.
	09.09 Take responsibility for professional growth.

Job Attainment	
10.0	Find, assess and apply to job opportunities.
10.01	Identify online job posts relevant to his or her career aspirations.
10.02	Compare and contrast the job posts' required qualifications, job duties, compensation, benefits and employers.
10.03	Define what information, documentation and writing prompts are required for the positions.
11.0	Communicate personal competence, character and fit for a job opportunity.
11.01	Develop a resume.
11.02	Write a cover letter.
11.03	Curate a professional portfolio that includes work products.
11.04	Prepare for and experience a mock job interview.
12.0	Cultivate and leverage relationships to professionally advance.
12.01	Request a signed reference letter, letter of recommendation and/or an online skill/professionalism endorsement.
12.02	Develop a plan to cultivate a professional digital footprint.
12.03	Develop a networking plan for a specific industry of interest.

Standards

After successfully completing this program, the student will be able to perform the following:

01.0 Demonstrate knowledge of the healthcare delivery system and health occupations.
02.0 Demonstrate the ability to communicate and use interpersonal skills effectively.
03.0 Demonstrate legal and ethical responsibilities.
04.0 Demonstrate an understanding of and apply wellness and disease concepts.
05.0 Recognize and practice safety and security procedures.
06.0 Recognize and respond to emergency situations.
07.0 Recognize and practice infection control procedures.
08.0 Demonstrate an understanding of information technology applications in healthcare.
09.0 Demonstrate employability skills.
10.0 Demonstrate knowledge of blood borne diseases, including HIV/AIDS.
11.0 Apply basic math and science skills.
12.0 Use verbal and written communications specific to nurse assisting.
13.0 Demonstrate legal and ethical responsibilities specific to nurse assisting.
14.0 Perform physical comfort and safety functions specific to nurse assisting.
15.0 Provide personal patient care.
16.0 Perform patient care procedures.
17.0 Apply principles of nutrition.
18.0 Provide care for geriatric patients.
19.0 Apply the principles of infection control specific to nursing assisting.
20.0 Provide biological, psychological, and social support.
21.0 Perform supervised organizational functions, following the patient care plan.
22.0 Assist with restorative (rehabilitative) activities.

Florida Department of Education
Student Performance Standards

Program Title: **Nursing Assistant (Articulated)**
Career Certificate Program Number: **H170690**

The **Basic Health Care Worker (HSC0003)** is referred to as the **Health Science Core** and is the first OCP in the majority of the Career Certificate Program health science programs. Secondary and Postsecondary students completing the health science core will not have to repeat the core in any other health science program in which it is a part. When the recommended sequence is followed, the structure allows students to complete at specified points for employment or remain for advanced training or cross-training.

Course Number: HSC0003
Occupational Completion Point: A
Basic Healthcare Worker – 90 Hours

To ensure consistency whenever these courses are offered, the health science core standards (1-11) and benchmarks have been placed in a separate document. To access this document, visit this link:
https://www.fldoe.org/file/20894/health-sci-core-psav-cc-2627.rtf

Course Number: HCP0121 **Occupational Completion Point: B** **Nurse Aide and Orderly (Articulated) – 75 Hours**	
12.0	Use verbal and written communications specific to nurse assisting. The student will be able to:
12.01	Obtain specified data from patient and family.
12.02	Utilize verbal and written information to assist with the patient's plan of care.
12.03	Demonstrate use of the communication system.
13.0	Demonstrate legal and ethical responsibilities specific to nurse assisting. The student will be able to:
13.01	Discuss and demonstrate legal and ethical behavior within the nursing assistant scope of practice including role limitations in Florida.
13.02	Describe the purpose of the chain of communication to resolve conflict.
13.03	Follow policies and procedures affecting the health, safety, and well-being of patients.
13.04	Demonstrate safe standards of patient care including prevention and quality of care
13.05	Exhibit behavior supporting and promoting patients’ and/or residents' rights.

	13.06 Recognize potential for and prevention of medical errors.
	13.07 Practice the proper procedures to follow regarding medical errors.
	13.08 Follow policies and procedures affecting the health, safety, and well-being of patients.
	13.09 Recognize and report signs of substance abuse.
	13.10 Demonstrate the understanding of vulnerable population abuse and reporting procedures per agency.
	13.11 Recognize that a C.N.A. must self-report any crimes they've been involved in within 30 days of the offense in accordance with 456.0727(1)(w), F.S.
	13.12 Define Omnibus Budget Reconciliation Act (OBRA).
	13.13 Define Minimum Data Set (MDS).
14.0	Perform physical comfort and safety functions specific to nurse assisting. The student will be able to:
	14.01 Implement appropriate regulatory and accrediting agency patient safety guidelines.
	14.02 Maintain safe patient units, equipment, and a comfortable environment.
	14.03 Maintain service areas on the units including supplies and equipment.
	14.04 Observe, report, and record changes in the patient's behavior as needed, including mental awareness.
	14.05 Demonstrate adjustment of bed and side-rails according to facility policy.
	14.06 Demonstrate and assist patient to dangle.
	14.07 Demonstrate lifting, supporting and transferring patients from bed to chair, bed to bed, and bed to stretcher, including the use of the various assistive devices and equipment while utilizing proper body mechanics and patient safety measures
	14.08 Demonstrate the proper use of a gait/transfer belt in both transfer and ambulation.
	14.09 Assist patient in ambulation, including the use of crutch, cane, or walker.
	14.10 Demonstrate the proper wheelchair safety techniques and assist patient as needed with use.
	14.11 Apply supportive devices as directed (e.g., footboard, over-bed cradle, alternating pressure mattress).
	14.12 Assist patient with care and use of prosthetic/orthotic devices.
	14.13 Describe emergency procedures utilized in the clinical area(s) and the role of the nursing assistant in these procedures.
15.0	Provide personal patient care. The student will be able to:

	15.01 Perform bed bath; observe and report changes in a patient including skin and level of consciousness.
	15.02 Assist with shower or tub bath, including the use of specialty tubs or prepackaged disposable-bagged bath.
	15.03 Administer back rub with bath and as needed.
	15.04 Assist patient with hair care utilizing sink, tub, shower, bed or shower cap.
	15.05 Demonstrate the use of a safety and/or electric razor to shave the patient.
	15.06 Demonstrate how to groom patient, including hair, skin, foot, hand and nail care.
	15.07 Assist with and/or administer oral hygiene including denture care.
	15.08 Assist patient to dress.
	15.09 Assist patient with toileting using various types of restorative and rehabilitative equipment.
	15.10 Assist patient with use of bedpan (standard and fracture)
	15.11 Assist with bowel and bladder training.
	15.12 Assist and/ or provide perineal care.
	15.13 Empty, measure and record urinary output and/or drainage.
	15.14 Demonstrate application and use of a leg bag, leg strap and dignity bag.
	15.15 Monitor and assist with the drainage of urostomy bags and colostomy bags.
	15.16 Assist patient with both donning and doffing prosthesis and brace.
	15.17 Assist patient with meals.
	15.18 Describe the relationships of body systems when providing patient care.
	15.19 Recognize abnormal signs and symptoms of common diseases and conditions when providing patient care.
16.0	Perform patient care procedures. The student will be able to:
	16.01 Demonstrate ability to accurately measure, record and report vital signs.
	16.02 Assist with the admission of a patient and/or resident.
	16.03 Assist with the admission, transfer, and discharge of a patient and/or resident.

16.04	Maintain patient-belongings list.
16.05	Make unoccupied/occupied bed.
16.06	Provide passive range-of-motion exercises.
16.07	Apply anti-embolic hose and sequential compression devices.
16.08	Understand and demonstrate proper collection of routine, timed urine and clean catch urine specimens.
16.09	Record fluid intake and output (I&O).
16.10	Observe, record, and report patient's emesis.
16.11	Monitor and provide urinary catheter care and drainage systems.
16.12	Assist with ostomy care including emptying or changing ostomy bags that do not adhere to the skin.
16.13	Collect stool specimen.
16.14	Assist with the collection of a sputum specimen.
16.15	Assist the nurse with care of the patient with complex medical needs.
16.16	Assist patient to apply binders.
16.17	Care for patient in skin and skeletal traction.
16.18	Assist with pre-operative and post-operative patient care.
16.19	Reinforce dressings under the supervision of the RN/LPN.
16.20	Obtain and record an apical pulse.
16.21	Provide cast care and/or pin care.
16.22	Provide care for eyeglasses, artificial eyes, and contact lens.
17.0	Apply principles of nutrition. – The student will be able to:
17.01	Identify nutrients and food groups.
17.02	Develop a basic food plan.
17.03	Describe special diets.

	17.04 Check patient's diet tray for accuracy.
	17.05 Monitor and document Nutritional Intake.
	17.06 Identify and implement regional, cultural and religious food guidelines/preferences.
	17.07 Demonstrate knowledge of the need for thickened liquids and fluid consistency.
	17.08 Identify methods of maintaining fluid balance including encouraging and restricting fluids.
18.0	Provide care for geriatric patients. The student will be able to:
	18.01 Identify and assist with methods and procedures to prevent pressure ulcers.
	18.02 Identify and assist with methods to prevent falls in the elderly.
	18.03 Identify and assist with safety principles as related to the elderly.
	18.04 Describe general characteristics, particular needs, and age related changes of the elderly.
	18.05 Identify attitudes and living habits that promote positive mental and physical health for the elderly.
	18.06 Distinguish between fact and fallacy about the aging process.
	18.07 Apply reality orientation techniques and validation therapy unless it is contraindicated by the patient diagnosis.
	18.08 Recognize and respond appropriately to symptoms of common diseases, including dementia, depression/suicide and Alzheimers.
	18.09 Provide and involve patients in diversional activities.
	18.10 Identify common alterations in elderly patient behavior.
	18.11 Provide care for patients with special needs (e.g., impaired hearing, impaired vision, immobility, impaired body functions, cognitively impaired (dementia)).
	18.12 Demonstrate awareness of common behaviors in drug use and abuse in the elderly.
	18.13 Report concerns to the nurse and appropriate authorities related to drug use and abuse in the elderly patient.
	18.14 Identify the need for community resources and services available to the elderly and their caregiver.
	18.15 Identify components of the grief process.
	18.16 Demonstrate an understanding of end of life care, hospice and palliative care.
19.0	Apply the principles of infection control specific to nursing assisting. The student will be able to:

	19.01 Discuss transmission-based precautions.
	19.02 Identify the chain of infection.
	19.03 Provide care for patients with infectious diseases applying the principles of "Standard Precautions" utilized with all patients as well as special procedures required.
	19.04 Apply the proper use of personal protective equipment (PPE) for all types of isolation including donning and removing PPE appropriately.
	19.05 Follow isolation procedure with food tray, PPE, and other supplies/equipment.
	19.06 Collect specimen from patient in isolation.
20.0	Provide biological, psychological, and social support. The student will be able to:
	20.01 Discuss family roles and their significance to health.
	20.02 Respond to patient and family emotional needs.
21.0	Perform supervised organizational functions, following the patient care plan. The student will be able to:
	21.01 Organize and prioritize patient-care assignments.
	21.02 Complete assignments accurately and in a timely manner.
22.0	Assist with restorative (rehabilitative) activities. The student will be able to:
	22.01 List the purposes of restorative (rehabilitation) program.
	22.02 Assist patient with specified restorative (rehabilitation) needs.
	22.03 Assist patients/residents to reach the optimum level of independence.

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as, experimental, quality, and safety procedures are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate and troubleshoot equipment/tools used to make observations. Students understand measurement error; and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

Special Notes

The program focuses on broad, transferable skills and stresses understanding and demonstration of the following elements of the health care industry; planning, management, finance, technical and production skills, underlying principles of technology, labor issues, community issues and health, safety, and environmental issues.

This program meets the Department of Health's education requirements for HIV/AIDS, Domestic Violence and Prevention of Medical Errors. Although not a requirement for initial licensure, it is a requirement for renewal, therefore the instructor **may** provide a certificate for renewal purposes to the student verifying these requirements have been met.

If students in this program are seeking a licensure, certificate or registration through the Department of Health, please refer to 456.0635, F.S. for more information on disqualification for a license, certificate, or registration through the Department of Health.

The length of this program is 165 hours. Completion of this program should enable the postsecondary student to be given advanced standing in the Patient Care Technician and Patient Care Assistant programs.

The Core should be taken first in the program. Following the successful completion of the core, the student is eligible to take the National Health Care Foundation Skill Standards Assessment with instructor approval and the completion of a portfolio.

Career and Technical Student Organization (CTSO)

CTSOs are co-curricular career and technical student organizations providing leadership training and reinforcing specific career and technical skills. Career and Technical Student Organizations provide activities for students as an integral part of the instruction offered. Other CTSOs not listed in this curriculum framework or recognized by the Florida Department of Education are permissible provided they support student mastery over the standards and benchmarks of this curriculum framework.

Cooperative Training – OJT

On-the-job training is appropriate but not required for this program. Whenever offered, the rules, guidelines, and requirements specified in the OJT framework apply.

Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

Note: postsecondary curriculum and regulated secondary programs cannot be modified.

Florida Department of Education
Curriculum Framework

No new students may be enrolled in this program starting 2026-27. The last year to report any enrollment is 2027-28. This program was replaced by Patient Care Assistant H700500 (0351390207).

Program Title: **Patient Care Assistant**
Program Type: **Career Preparatory**
Career Cluster: **Health Science**

Career Certificate Program	
Program Number	H170692
CIP Number	0351390202
Grade Level	30, 31
Program Length	290 hours
Teacher Certification	Refer to the **Program Structure** section.
CTSO	HOSA
SOC Codes (all applicable)	For program SOC codes, please see the Program and Course Tables section of the CTE Program Resources page linked below.
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml
Basic Skills Level	N/A

Purpose

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Health Science career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of Health Science career cluster.

This program is designed to prepare students for employment as cross trained nursing assistants. All others, Patient Care Assistants, Nursing Aides and Orderlies, or Home Health Aides. This program offers a broad foundation of knowledge and skills, expanding the traditional role of the nursing assistant, for both acute and long term care settings.

The program focuses on broad, transferable skills and stresses understanding and demonstration of the following elements of the health care industry; planning, management, finance, technical and production skills, underlying principles of technology, labor issues, community issues and health, safety, and environmental issues.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Program Structure

This program is a planned sequence of instruction consisting of 4 occupational completion points.

This program is comprised of courses which have been assigned course numbers in the SCNS (Statewide Course Numbering System) in accordance with Section 1007.24 (1), F.S. Career and Technical credit shall be awarded to the student on a transcript in accordance with Section 1001.44(3) (b), F.S.

To teach the courses listed below, instructors must hold at least one of the teacher certifications indicated for that course.

The following table illustrates the postsecondary program structure:

OCP	Course Number	Course Title	Teacher Certification	Length
A	HSC0003	Basic Healthcare Worker	REG NURSE 7 G LPN 7 G* PRAC NURSE @7 %7%G (Must be a Registered Nurse)	90 hours
B	HCP0121	Nurse Aide and Orderly (Articulated)		75 hours
C	HCP0332	Advanced Home Health Aide	REG NURSE 7 G PRAC NURSE @7 %7%G (Must be a Registered Nurse)	50 hours
D	HCP0020	Patient Care Assistant		75 hours

**** The LPN 7 G district issued certification is a practical nurse. A practical nurse can only be utilized as an instructor of the CNA training program when they are supervised by the program coordinator which must be a registered nurse. Please refer to 64B9-15.005, F.A.C., for requirements.***

Regulated Programs

Successful completion of this program from an approved school prepares the student for certification for employment as a Nursing Assistant in a nursing home, in accordance with Chapter 464.203, Florida Statutes (F.S.). To be approved, this program must be supervised by a registered nurse and have follow the faculty qualifications set forth in 64B9-15.005(3)(a), F.A.C.

New programs must be approved by the Board of Nursing, Department of Health prior to enrolling students.

Those students who satisfactorily complete an approved course are eligible to apply to take the national nursing assistant examination being utilized in Florida, in accordance with Chapter 464.203, F.S. This program includes both Acute and Long Term Care.

In accordance with 64B9-15.005, F.A.C., students will perform nursing skills in the clinical and simulated laboratory settings under the supervision of a qualified instructor. The recommended teacher/student ratio in the clinical area is 1 to 12, but the maximum is 1 to 15.

In accordance with 64B9-15.006, F.A.C., Clinical and simulated laboratory learning experiences must correlate with 80 hours of didactic instruction In addition, a minimum of 40 hours clinical experiences must be obtained. Simulated labs are not a substitute for clinical experience. The clinical instruction shall include at least 20 hours of long term care clinical instruction in a licensed nursing home or licensed long term care facility.

In addition, Students must have a minimum of 16 hours of training in communication and interpersonal skills, infection control, safety/emergency procedures, promoting residents' independence, and respecting residents' rights prior to any direct contact with a resident.

According to Section 400.211, F.S., persons who are enrolled in, or have completed, a state approved nursing assistant training program may be employed by a licensed nursing facility for a period of four months. However, the certification requirements must be met within four months of such initial employment.

Students must have a minimum of 16 hours of training in communication and interpersonal skills, infection control, safety/emergency procedures, promoting residents' independence, and respecting residents' rights prior to any direct contact with a resident.

Please refer to 42CFR§484 for the clinical requirements for the Home Health Aide program.

Florida's Career Readiness Skills for CTE Programs

Employability Skills	
01.0	Apply academic skills to workplace scenarios.
01.01	Use reading skills.
01.02	Use writing skills.
01.03	Use mathematical strategies and procedures.
01.04	Use scientific principles and procedures.
02.0	Design a solution to an industry problem.
02.01	Use critical thinking.
02.02	Use creativity.
02.03	Make sound decisions.
02.04	Solve problems.
02.05	Reason.
02.06	Plan and organize.
03.0	Manage resources within an industry project
03.01	Manage time.
03.02	Manage money or resources.
03.03	Manage materials.
03.04	Manage personnel.
04.0	Oversee the subcomponents, operations and output of a technical or organizational system.
04.01	Manage systems.
04.02	Monitor systems.
04.03	Improve systems.
05.0	Use information for decision making.
05.01	Locate information.
05.02	Organize information.
05.03	Use information.

	05.04 Analyze information.
	05.05 Communicate information.
06.0	Apply relevant technology to workplace scenarios to aid productivity.
	06.01 Use technology.
07.0	Interpret and express interpersonal communication.
	07.01 Communicate verbally.
	07.02 Listen actively.
	07.03 Comprehend written material.
	07.04 Convey information in writing.
	07.05 Communicate nonverbally.
	07.06 Interpret nonverbal communication.
08.0	Interact with others to accomplish workplace goals.
	08.01 Collaborate with others in a team.
	08.02 Respond to customer needs.
	08.03 Exercise leadership.
	08.04 Negotiate to resolve conflict.
	08.05 Respect others.
09.0	Manage personal behavior to maximize productivity and professional growth.
	09.01 Demonstrate responsibility and self-discipline.
	09.02 Adapt and show flexibility.
	09.03 Work independently.
	09.04 Demonstrate a willingness to learn.
	09.05 Demonstrate integrity.
	09.06 Demonstrate professionalism.
	09.07 Take initiative.
	09.08 Display positive attitude.
	09.09 Take responsibility for professional growth.

Job Attainment	
10.0	Find, assess and apply to job opportunities.
	10.01 Identify online job posts relevant to his or her career aspirations.
	10.02 Compare and contrast the job posts' required qualifications, job duties, compensation, benefits and employers.
	10.03 Define what information, documentation and writing prompts are required for the positions.
11.0	Communicate personal competence, character and fit for a job opportunity.
	11.01 Develop a resume.
	11.02 Write a cover letter.
	11.03 Curate a professional portfolio that includes work products.
	11.04 Prepare for and experience a mock job interview.
12.0	Cultivate and leverage relationships to professionally advance.
	12.01 Request a signed reference letter, letter of recommendation and/or an online skill/professionalism endorsement.
	12.02 Develop a plan to cultivate a professional digital footprint.
	12.03 Develop a networking plan for a specific industry of interest.

Standards

After successfully completing this program, the student will be able to perform the following:

01.0 Demonstrate knowledge of the healthcare delivery system and health occupations.
02.0 Demonstrate the ability to communicate and use interpersonal skills effectively.
03.0 Demonstrate legal and ethical responsibilities.
04.0 Demonstrate an understanding of and apply wellness and disease concepts.
05.0 Recognize and practice safety and security procedures.
06.0 Recognize and respond to emergency situations.
07.0 Recognize and practice infection control procedures.
08.0 Demonstrate an understanding of information technology applications in healthcare.
09.0 Demonstrate employability skills.
10.0 Demonstrate knowledge of blood borne diseases, including HIV/AIDS.
11.0 Apply basic math and science skills.
12.0 Use verbal and written communications specific to the Nursing Assistant.
13.0 Demonstrate legal and ethical responsibilities specific to the Nursing Assistant.
14.0 Perform physical comfort and safety functions specific to the Nursing Assistant.
15.0 Provide personal patient care.
16.0 Perform patient care procedures.
17.0 Apply principles of nutrition.
18.0 Provide care for geriatric patients.
19.0 Apply the principles of infection control specific to the Nursing Assistant.
20.0 Provide biological, psychological, and social support.
21.0 Perform supervised organizational functions, following the patient care plan.
22.0 Assist with restorative (rehabilitative) activities.
23.0 Use verbal and written communications specific to Home Health Aide.
24.0 Demonstrate legal and ethical responsibilities specific to Home Health Aide.
25.0 Perform physical comfort and safety functions specific to Home Health Aide.
26.0 Apply principles of nutrition specific to Home Health Aide.
27.0 Apply the principles of infection control specific to Home Health Aide.
28.0 Perform home health-care services.
29.0 Perform nursing assistant skills related to the hospital setting.
30.0 Provide nursing assistant care for the adult patient.

Florida Department of Education
Student Performance Standards

Program Title: **Patient Care Assistant**
Career Certificate Program Number: **H170692**

The **Basic Health Care Worker (HSC0003)** is referred to as the **Health Science Core** and is the first OCP in the majority of the Career Certificate Program health science programs. Secondary and Postsecondary students completing the health science core will not have to repeat the core in any other health science program in which it is a part. When the recommended sequence is followed, the structure allows students to complete at specified points for employment or remain for advanced training or cross-training.

Course Number: HSC0003
Occupational Completion Point: A
Basic Healthcare Worker – 90 Hours

To ensure consistency whenever these courses are offered, the health science core standards (1-11) and benchmarks have been placed in a separate document. To access this document, visit this link:
https://www.fldoe.org/file/20894/health-sci-core-psav-cc-2627.rtf

Course Number: HCP0121
Occupational Completion Point: B
Nurse Aide and Orderly (Articulated) – 75 Hours

The following intended outcomes 12-23 should be taught together as a module to achieve the occupational completion point of Articulated Nursing Assistant. The average achieving student should be able to complete the module in 75 clock hours. The standard length for the Nursing Assistant (Articulated) program including the core is 165 hours but **cannot** be less than 120 hours.	
12.0	Use verbal and written communications specific to Nurse Assisting. The student will be able to:
12.01	Obtain specified data from patient and family.
12.02	Utilize verbal and written information to assist with the patient's plan of care.
12.03	Demonstrate use of the communication system.
13.0	Demonstrate legal and ethical responsibilities specific to Nurse Assisting. The student will be able to:
13.01	Discuss and demonstrate legal and ethical behavior within the nursing assistant scope of practice including role limitations in Florida.
13.02	Describe the purpose of the chain of communication to resolve conflict.
13.03	Follow policies and procedures affecting the health, safety, and well-being of patients.

13.04	Demonstrate safe standards of patient care including prevention and quality of care
13.05	Exhibit behavior supporting and promoting patients' and/or residents' rights.
13.06	Recognize potential for and prevention of medical errors.
13.07	Practice the proper procedures to follow regarding medical errors.
13.08	Follow policies and procedures affecting the health, safety, and well-being of patients.
13.09	Recognize and report signs of substance abuse.
13.10	Demonstrate the understanding of vulnerable population abuse and reporting procedures per agency.
13.11	Define Omnibus Budget Reconciliation Act (OBRA).
13.12	Define Minimum Data Set (MDS).
14.0	Perform physical comfort and safety functions specific to Nurse Assisting. The student will be able to:
14.01	Implement appropriate regulatory and accrediting agency patient safety guidelines.
14.02	Maintain safe patient units, equipment, and a comfortable environment.
14.03	Maintain service areas on the units including supplies and equipment.
14.04	Observe, report, and record changes in the patient's behavior as needed, including mental awareness.
14.05	Demonstrate adjustment of bed and side-rails according to facility policy.
14.06	Demonstrate and assist patient to dangle.
14.07	Demonstrate lifting, supporting and transferring patients from bed to chair, bed to bed, and bed to stretcher, including the use of the various assistive devices and equipment while utilizing proper body mechanics and patient safety measures
14.08	Demonstrate the proper use of a gait/transfer belt in both transfer and ambulation.
14.09	Assist patient in ambulation, including the use of crutch, cane, or walker.
14.10	Demonstrate the proper wheelchair safety techniques and assist patient as needed with use.
14.11	Apply supportive devices as directed (e.g., footboard, over-bed cradle, alternating pressure mattress).
14.12	Assist patient with care and use of prosthetic/orthotic devices.
14.13	Describe emergency procedures utilized in the clinical area(s) and the role of the nursing assistant in these procedures.

15.0	Provide personal patient care. The student will be able to:
	15.01 Perform bed bath; observe and report changes in a patient including skin and level of consciousness.
	15.02 Assist with shower or tub bath, including the use of specialty tubs or prepackaged disposable-bagged bath.
	15.03 Administer back rub with bath and as needed.
	15.04 Assist patient with hair care utilizing sink, tub, shower, bed or shower cap.
	15.05 Demonstrate the use of a safety and/or electric razor to shave the patient.
	15.06 Demonstrate how to groom patient, including hair, skin, foot, hand and nail care.
	15.07 Assist with and/or administer oral hygiene including denture care.
	15.08 Assist patient to dress.
	15.09 Assist patient with toileting using various types of restorative and rehabilitative equipment.
	15.10 Assist patient with use of bedpan (standard and fracture)
	15.11 Assist with bowel and bladder training.
	15.12 Assist and/ or provide perineal care.
	15.13 Empty, measure and record urinary output and/or drainage.
	15.14 Demonstrate application and use of a leg bag, leg strap and dignity bag.
	15.15 Monitor and assist with the drainage of urostomy bags and colostomy bags.
	15.16 Assist patient with both donning and doffing prosthesis and brace.
	15.17 Assist patient with meals.
	15.18 Describe the relationships of body systems when providing patient care.
	15.19 Recognize abnormal signs and symptoms of common diseases and conditions when providing patient care.
16.0	Perform patient care procedures. The student will be able to:
	16.01 Demonstrate ability to accurately measure, record and report vital signs.
	16.02 Assist with the admission of a patient and/or resident.

16.03	Assist with the admission, transfer, and discharge of a patient and/or resident.
16.04	Maintain patient-belongings list.
16.05	Make unoccupied/occupied bed.
16.06	Provide passive range-of-motion exercises.
16.07	Apply anti-embolic hose and sequential compression devices.
16.08	Understand and demonstrate proper collection of routine, timed urine and clean catch urine specimens.
16.09	Record fluid intake and output (I&O).
16.10	Observe, record, and report patient's emesis.
16.11	Monitor and provide urinary catheter care and drainage systems.
16.12	Assist with ostomy care including emptying or changing ostomy bags that do not adhere to the skin.
16.13	Collect stool specimen.
16.14	Assist with the collection of a sputum specimen.
16.15	Assist the nurse with care of the patient with complex medical needs.
16.16	Assist patient to apply binders.
16.17	Care for patient in skin and skeletal traction.
16.18	Assist with pre-operative and post-operative patient care.
16.19	Reinforce dressings under the supervision of the RN/LPN.
16.20	Obtain and record an apical pulse.
16.21	Provide cast care and/or pin care.
16.22	Provide care for eyeglasses, artificial eyes, and contact lens.
17.0	Apply principles of nutrition. The student will be able to:
17.01	Identify nutrients and food groups.
17.02	Develop a basic food plan.

	17.03 Describe special diets.
	17.04 Check patient's diet tray for accuracy.
	17.05 Monitor and document Nutritional Intake.
	17.06 Identify and implement regional, cultural and religious food guidelines/preferences.
	17.07 Demonstrate knowledge of the need for thickened liquids and fluid consistency.
	17.08 Identify methods of maintaining fluid balance including encouraging and restricting fluids.
18.0	Provide care for geriatric patients. The student will be able to:
	18.01 Identify and assist with methods and procedures to prevent pressure ulcers.
	18.02 Identify and assist with methods to prevent falls in the elderly.
	18.03 Identify and assist with safety principles as related to the elderly.
	18.04 Describe general characteristics, particular needs, and age related changes of the elderly.
	18.05 Identify attitudes and living habits that promote positive mental and physical health for the elderly.
	18.06 Distinguish between fact and fallacy about the aging process.
	18.07 Apply reality orientation techniques and validation therapy unless it is contraindicated by the patient diagnosis.
	18.08 Recognize and respond appropriately to symptoms of common diseases, including dementia, depression/suicide and Alzheimers.
	18.09 Provide and involve patients in diversional activities.
	18.10 Identify common alterations in elderly patient behavior.
	18.11 Provide care for patients with special needs (e.g., impaired hearing, impaired vision, immobility, impaired body functions, cognitively impaired (dementia)).
	18.12 Demonstrate awareness of common behaviors in drug use and abuse in the elderly.
	18.13 Report concerns to the nurse and appropriate authorities related to drug use and abuse in the elderly patient.
	18.14 Identify the need for community resources and services available to the elderly and their caregiver.
	18.15 Identify components of the grief process.
	18.16 Demonstrate an understanding of end of life care, hospice and palliative care.

19.0	Apply the principles of infection control specific to nursing assisting. The student will be able to:
	19.01 Discuss transmission-based precautions.
	19.02 Identify the chain of infection.
	19.03 Provide care for patients with infectious diseases applying the principles of "Standard Precautions" utilized with all patients as well as special procedures required.
	19.04 Apply the proper use of personal protective equipment (PPE) for all types of isolation including donning and removing PPE appropriately.
	19.05 Follow isolation procedure with food tray, PPE, and other supplies/equipment.
	19.06 Collect specimen from patient in isolation.
20.0	Provide biological, psychological, and social support. The student will be able to:
	20.01 Discuss family roles and their significance to health.
	20.02 Respond to patient and family emotional needs.
21.0	Perform supervised organizational functions, following the patient care plan. The student will be able to:
	21.01 Organize and prioritize patient-care assignments.
	21.02 Complete assignments accurately and in a timely manner.
22.0	Assist with restorative (rehabilitative) activities. The student will be able to:
	22.01 List the purposes of restorative (rehabilitation) program.
	22.02 Assist patient with specified restorative (rehabilitation) needs.
	22.03 Assist patients/residents to reach the optimum level of independence.

Course Number: HCP0332
Occupational Completion Point: C
Advanced Home Health Aide – 50 hours

Students in this module have already completed a Nursing Assistant program. After completing this module, the student will have achieved the occupational completion point of Advanced Home Health Aide (a home health aide who is also a nursing assistant). This program also meets the requirements of Home Health Aide as stated in Rules of the Department of Health and Rehabilitative services, Division of Health, Chapter 10D-68 - Minimum Standards for Home Health Agencies.

Please refer to 42CFR§484 for the clinical and faculty requirements for the Home Health Aide course.

The recommended length of instruction for this module is 50 clock hours but no less than 20. Beginning 1995-96, secondary students who have completed the course 8417210 Nursing Assistant should take this module to become a Home Health Aide.

23.0	Use verbal and written communications specific to Home Health Aide. The student will be able to:
	23.01 Obtain data from patient and family/significant others.
	23.02 Utilize verbal and written information to contribute to the patient's plan of care.
	23.03 Recognizes cultural differences in family.
24.0	Demonstrate legal and ethical responsibilities specific to Home Health Aide. The student will be able to:
	24.01 Demonstrate legal and ethical behavior within the role and scope of home health aide responsibilities.
	24.02 Follow policies and procedures affecting the health, safety, and well-being of patients in the home setting.
25.0	Perform physical comfort and safety functions specific to Home Health Aide. The student will be able to:
	25.01 Maintain a clean and safe home environment for the patient.
	25.02 Identify emergency evacuation procedures with adaptations to the home setting.
26.0	Apply principles of nutrition specific to Home Health Aide. The student will be able to:
	26.01 List factors that must be considered when purchasing food.
	26.02 List factors that must be considered when storing food.
	26.03 Discuss preparation and serving of trays in the home.
27.0	Apply the principles of infection control specific to Home Health Aide. The student will be able to:
	27.01 Provide care for patients with infectious diseases in the home.
	27.02 Follow isolation procedures with food tray, garments, and other materials in the home.
	27.03 Utilize standard and blood borne precautions in all home care.
28.0	Perform home health-care services. The student will be able to:
	28.01 Follow an established work plan with the patient and family.

28.02	Perform patient-related cleaning tasks and laundry.
28.03	Identify methods for medication storage.
28.04	Assist patient with taking self-administered prescribed medication in the home and identify possible side effects and emergency procedures for adverse reactions in accordance with 59A-8.0095, F.A.C.
28.05	Demonstrate how to utilize specified equipment and supplies in the home.

Course Number: HCP0020
Occupational Completion Point: D
Patient Care Assistant – 75 Hours

Students enrolled in this module have previously completed a Nursing Assistant and Home Health Aide program and are adding these skills to work in a health care facility other than a nursing home. The average achieving student should complete this module in 75 clock hours. The occupational completion point Patient Care Assistant can only be achieved when this module is completed plus the modules/or credentials for Home Health Aide and Nursing Assistant are satisfied.

29.0	Perform nursing assistant skills related to the hospital setting. The student will be able to:
29.01	Care for hospital equipment and supplies.
29.02	Transfer patient to stretcher and wheelchair.
29.03	Prepare hot and cold applications for nurse to apply them.
29.04	Assist patient to apply binders.
29.05	Care for patient in skin and skeletal traction.
29.06	Assist with pre-operative and post-operative patient care.
29.07	Reinforce dressings.
29.08	Practice nursing assistant skills in the hospital setting.
30.0	Provide nursing assistant care for the adult patient. The student will be able to:
30.01	Assist with physical examination.
30.02	Care for patients receiving oxygen therapy.
30.03	Change an unsterile dressing.
30.04	Take an apical pulse.

30.05 Take pedal pulse.
30.06 Demonstrate an understanding of artificial eye/contact lens care.
30.07 Demonstrate an understanding and knowledge of needs of patients with common health problems.
30.08 Measure pulse oximetry and report decreasing levels of O_2 saturation.

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as, experimental, quality, and safety procedures are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate and troubleshoot equipment/tools used to make observations. Students understand measurement error; and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

Special Notes

This program also meets the requirements of Home Health Aide as stated in rules of the department of health and rehabilitative services, division of health, chapter 10d-68 - minimum standards for home health agencies.

Please refer to 42CFR§484 for the clinical and faculty requirements for the Home Health Aide course.

This program meets the Department of Health's education requirements for HIV/AIDS, Domestic Violence and Prevention of Medical Errors. Although not a requirement for initial licensure, it is a requirement for renewal, therefore the instructor **may** provide a certificate for renewal purposes to the student verifying these requirements have been met.

If students in this program are seeking a licensure, certificate or registration through the Department of Health, please refer to 456.0635, F.S. for more information on disqualification for a license, certificate, or registration through the Department of Health.

Students who have completed the Health Science Core may articulate to this program. For teacher certification requirements for the remaining modules please check the certification diagram and/or the individual module.

Completion of this program should enable the postsecondary student to be given advanced standing in the Practical Nursing program H170607 as well as the ability to enter the Patient Care Technician program at OCP E.

The Core should be taken first in the program. Following the successful completion of the core, the student is eligible to take the National Health Care Foundation Skill Standards Assessment with instructor approval and the completion of a portfolio.

Career and Technical Student Organization (CTSO)

CTSOs are co-curricular career and technical student organizations providing leadership training and reinforcing specific career and technical skills. Career and Technical Student Organizations provide activities for students as an integral part of the instruction offered. Other CTSOs not listed in this curriculum framework or recognized by the Florida Department of Education are permissible provided they support student mastery over the standards and benchmarks of this curriculum framework.

Cooperative Training – OJT

On-the-job training is appropriate but not required for this program. Whenever offered, the rules, guidelines, and requirements specified in the OJT framework apply.

Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

Note: postsecondary curriculum and regulated secondary programs cannot be modified.

Florida Department of Education
Curriculum Framework

No new students may be enrolled in this program starting 2026-27. The last year to report any enrollment is 2027-28. This program was replaced by Patient Care Technician H700600 (0351390208).

Program Title: **Patient Care Technician**
Program Type: **Career Preparatory**
Career Cluster: **Health Science**

Career Certificate Program		
Program Number	H170694	
CIP Number	0351390205	
Grade Level	30, 31	
Program Length	600 hours	
Teacher Certification	Refer to the **Program Structure** section.	
CTSO	HOSA	
SOC Codes (all applicable)	For program SOC codes, please see the Program and Course Tables section of the CTE Program Resources page linked below.	
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml	
Basic Skills Level	Computation (Mathematics): 10	Communications (Reading and Language Arts): 10

Purpose

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Health Science career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of Health Science career cluster.

This program is designed to prepare students for employment as advanced cross trained nursing assistants (patient care technicians), (Health Technologists and Technicians), Health Care Technicians, Patient Care Assistants, Nursing Aides and Orderlies, Home Health Aides, or Allied Health Assistants. This program offers a broad foundation of knowledge and skills, expanding the traditional role of the nursing assistant, for both acute and long term care settings.

The program focuses on broad, transferable skills and stresses understanding and demonstration of the following elements of the health care industry; planning, management, finance, technical and production skills, underlying principles of technology, labor issues, community issues and health, safety, and environmental issues.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Program Structure

This program is a planned sequence of instruction consisting of 7 occupational completion points.

This program is comprised of courses which have been assigned course numbers in the SCNS (Statewide Course Numbering System) in accordance with Section 1007.24 (1), F.S. Career and Technical credit shall be awarded to the student on a transcript in accordance with Section 1001.44(3) (b), F.S.

To teach the courses listed below, instructors must hold at least one of the teacher certifications indicated for that course.

The following table illustrates the postsecondary program structure:

OCP	Course Number	Course Title	Teacher Certification	Length
A	HSC0003	Basic Healthcare Worker	REG NURSE 7 G LPN 7 G* PRAC NURSE @7 %7%G (Must be a Registered Nurse)	90 hours
B	HCP0121	Nurse Aide and Orderly (Articulated)		75 hours
C	HCP0332	Advanced Home Health Aide	REG NURSE 7 G PRAC NURSE @7 %7%G (Must be a Registered Nurse)	50 hours
D	HCP0020	Patient Care Assistant		75 hours
E	HSC0016	Allied Health Assistant		150 hours
F	MEA0580	Advanced Allied Health Assistant		100 hours
G	PRN0094	Patient Care Technician		60 hours

**** The LPN 7 G district issued certification is a practical nurse. A practical nurse can only be utilized as an instructor of the CNA training program when they are supervised by the program coordinator which must be a registered nurse. Please refer to 64B9-15.005, F.A.C., for requirements.***

Florida's Career Readiness Skills for CTE Programs

Employability Skills	
01.0	Apply academic skills to workplace scenarios.
01.01	Use reading skills.
01.02	Use writing skills.
01.03	Use mathematical strategies and procedures.
01.04	Use scientific principles and procedures.
02.0	Design a solution to an industry problem.
02.01	Use critical thinking.
02.02	Use creativity.
02.03	Make sound decisions.
02.04	Solve problems.
02.05	Reason.
02.06	Plan and organize.
03.0	Manage resources within an industry project
03.01	Manage time.
03.02	Manage money or resources.
03.03	Manage materials.
03.04	Manage personnel.
04.0	Oversee the subcomponents, operations and output of a technical or organizational system.
04.01	Manage systems.
04.02	Monitor systems.
04.03	Improve systems.
05.0	Use information for decision making.
05.01	Locate information.
05.02	Organize information.
05.03	Use information.

	05.04 Analyze information.
	05.05 Communicate information.
06.0	Apply relevant technology to workplace scenarios to aid productivity.
	06.01 Use technology.
07.0	Interpret and express interpersonal communication.
	07.01 Communicate verbally.
	07.02 Listen actively.
	07.03 Comprehend written material.
	07.04 Convey information in writing.
	07.05 Communicate nonverbally.
	07.06 Interpret nonverbal communication.
08.0	Interact with others to accomplish workplace goals.
	08.01 Collaborate with others in a team.
	08.02 Respond to customer needs.
	08.03 Exercise leadership.
	08.04 Negotiate to resolve conflict.
	08.05 Respect others.
09.0	Manage personal behavior to maximize productivity and professional growth.
	09.01 Demonstrate responsibility and self-discipline.
	09.02 Adapt and show flexibility.
	09.03 Work independently.
	09.04 Demonstrate a willingness to learn.
	09.05 Demonstrate integrity.
	09.06 Demonstrate professionalism.
	09.07 Take initiative.
	09.08 Display positive attitude.
	09.09 Take responsibility for professional growth.

Job Attainment	
10.0	Find, assess and apply to job opportunities.
10.01	Identify online job posts relevant to his or her career aspirations.
10.02	Compare and contrast the job posts' required qualifications, job duties, compensation, benefits and employers.
10.03	Define what information, documentation and writing prompts are required for the positions.
11.0	Communicate personal competence, character and fit for a job opportunity.
11.01	Develop a resume.
11.02	Write a cover letter.
11.03	Curate a professional portfolio that includes work products.
11.04	Prepare for and experience a mock job interview.
12.0	Cultivate and leverage relationships to professionally advance.
12.01	Request a signed reference letter, letter of recommendation and/or an online skill/professionalism endorsement.
12.02	Develop a plan to cultivate a professional digital footprint.
12.03	Develop a networking plan for a specific industry of interest.

Standards

After successfully completing this program, the student will be able to perform the following:

01.0 Demonstrate knowledge of the healthcare delivery system and health occupations.
02.0 Demonstrate the ability to communicate and use interpersonal skills effectively.
03.0 Demonstrate legal and ethical responsibilities.
04.0 Demonstrate an understanding of and apply wellness and disease concepts.
05.0 Recognize and practice safety and security procedures.
06.0 Recognize and respond to emergency situations.
07.0 Recognize and practice infection control procedures.
08.0 Demonstrate an understanding of information technology applications in healthcare.
09.0 Demonstrate employability skills.
10.0 Demonstrate knowledge of blood borne diseases, including HIV/AIDS.
11.0 Apply basic math and science skills.
12.0 Use verbal and written communications specific to the Nursing Assistant.
13.0 Demonstrate legal and ethical responsibilities specific to the Nursing Assistant.
14.0 Perform physical comfort and safety functions specific to the Nursing Assistant.
15.0 Provide personal patient care.
16.0 Perform patient care procedures.
17.0 Apply principles of nutrition.
18.0 Provide care for geriatric patients.
19.0 Apply the principles of infection control specific to the Nursing Assistant.
20.0 Provide biological, psychological, and social support.
21.0 Perform supervised organizational functions, following the patient care plan.
22.0 Assist with restorative (rehabilitative) activities.
23.0 Use verbal and written communications specific to Home Health Aide.
24.0 Demonstrate legal and ethical responsibilities specific to Home Health Aide.
25.0 Perform physical comfort and safety functions specific to Home Health Aide.
26.0 Apply principles of nutrition specific to Home Health Aide.
27.0 Apply the principles of infection control specific to Home Health Aide.
28.0 Perform home health-care services.
29.0 Perform nursing assistant skills related to the hospital setting.
30.0 Provide nursing assistant care for the adult patient.
31.0 Perform skills representative of 1-3 major allied health areas as determined by local labor market demand.
32.0 Successfully complete a clinical rotation in the selected major allied health areas.
33.0 Perform additional skills from the previous module which are in the aide level and do not go beyond the scope of practice of unlicensed assistive personnel.
34.0 Successfully complete a clinical rotation in the selected major allied health areas.
35.0 Demonstrate knowledge of organizational and effective team member skills.
36.0 Practice organizational and effective team member skills in a clinical setting.

Florida Department of Education
Student Performance Standards

Program Title: **Patient Care Technician**
Career Certificate Program Number: **H170694**

The **Basic Health Care Worker (HSC0003)** is referred to as the **Health Science Core** and is the first OCP in the majority of the Career Certificate Program health science programs. Secondary and Postsecondary students completing the health science core will not have to repeat the core in any other health science program in which it is a part. When the recommended sequence is followed, the structure allows students to complete at specified points for employment or remain for advanced training or cross-training.

Course Number: HSC0003
Occupational Completion Point: A
Basic Healthcare Worker – 90 Hours

To ensure consistency whenever these courses are offered, the health science core standards (1-11) and benchmarks have been placed in a separate document. To access this document, visit this link:
https://www.fldoe.org/file/20894/health-sci-core-psav-cc-2627.rtf

Course Number: HCP0121 **Occupational Completion Point: B** **Nurse Aide and Orderly (Articulated) – 75 Hours**	
The following intended outcomes 12-23 should be taught together as a module to achieve the occupational completion point of Articulated Nursing Assistant.	
12.0	Use verbal and written communications specific to Nurse Assisting. The student will be able to:
12.01	Obtain specified data from patient and family.
12.02	Utilize verbal and written information to assist with the patient's plan of care.
12.03	Demonstrate use of the communication system.
13.0	Demonstrate legal and ethical responsibilities specific to Nurse Assisting. The student will be able to:
13.01	Discuss and demonstrate legal and ethical behavior within the nursing assistant scope of practice including role limitations in Florida.
13.02	Describe the purpose of the chain of communication to resolve conflict.
13.03	Follow policies and procedures affecting the health, safety, and well-being of patients.
13.04	Demonstrate safe standards of patient care including prevention and quality of care

	13.05 Exhibit behavior supporting and promoting patients' and/or residents' rights.
	13.06 Recognize potential for and prevention of medical errors.
	13.07 Practice the proper procedures to follow regarding medical errors.
	13.08 Follow policies and procedures affecting the health, safety, and well-being of patients.
	13.09 Recognize and report signs of substance abuse.
	13.10 Demonstrate the understanding of vulnerable population abuse and reporting procedures per agency.
	13.11 Define Omnibus Budget Reconciliation Act (OBRA).
	13.12 Define Minimum Data Set (MDS).
14.0	Perform physical comfort and safety functions specific to Nurse Assisting. The student will be able to:
	14.01 Implement appropriate regulatory and accrediting agency patient safety guidelines.
	14.02 Maintain safe patient units, equipment, and a comfortable environment.
	14.03 Maintain service areas on the units including supplies and equipment.
	14.04 Observe, report, and record changes in the patient's behavior as needed, including mental awareness.
	14.05 Demonstrate adjustment of bed and side-rails according to facility policy.
	14.06 Demonstrate and assist patient to dangle.
	14.07 Demonstrate lifting, supporting and transferring patients from bed to chair, bed to bed, and bed to stretcher, including the use of the various assistive devices and equipment while utilizing proper body mechanics and patient safety measures
	14.08 Demonstrate the proper use of a gait/transfer belt in both transfer and ambulation.
	14.09 Assist patient in ambulation, including the use of crutch, cane, or walker.
	14.10 Demonstrate the proper wheelchair safety techniques and assist patient as needed with use.
	14.11 Apply supportive devices as directed (e.g., footboard, over-bed cradle, alternating pressure mattress).
	14.12 Assist patient with care and use of prosthetic/orthotic devices.
	14.13 Describe emergency procedures utilized in the clinical area(s) and the role of the nursing assistant in these procedures.
15.0	Provide personal patient care. The student will be able to:

15.01	Perform bed bath; observe and report changes in a patient including skin and level of consciousness.
15.02	Assist with shower or tub bath, including the use of specialty tubs or prepackaged disposable-bagged bath.
15.03	Administer back rub with bath and as needed.
15.04	Assist patient with hair care utilizing sink, tub, shower, bed or shower cap.
15.05	Demonstrate the use of a safety and/or electric razor to shave the patient.
15.06	Demonstrate how to groom patient, including hair, skin, foot, hand and nail care.
15.07	Assist with and/or administer oral hygiene including denture care.
15.08	Assist patient to dress.
15.09	Assist patient with toileting using various types of restorative and rehabilitative equipment.
15.10	Assist patient with use of bedpan (standard and fracture)
15.11	Assist with bowel and bladder training.
15.12	Assist and/ or provide perineal care.
15.13	Empty, measure and record urinary output and/or drainage.
15.14	Demonstrate application and use of a leg bag, leg strap and dignity bag.
15.15	Monitor and assist with the drainage of urostomy bags and colostomy bags.
15.16	Assist patient with both donning and doffing prosthesis and brace.
15.17	Assist patient with meals.
15.18	Describe the relationships of body systems when providing patient care.
15.19	Recognize abnormal signs and symptoms of common diseases and conditions when providing patient care.
16.0	Perform patient care procedures. The student will be able to:
16.01	Demonstrate ability to accurately measure, record and report vital signs.
16.02	Assist with the admission of a patient and/or resident.
16.03	Assist with the admission, transfer, and discharge of a patient and/or resident.

16.04	Maintain patient-belongings list.
16.05	Make unoccupied/occupied bed.
16.06	Provide passive range-of-motion exercises.
16.07	Apply anti-embolic hose and sequential compression devices.
16.08	Understand and demonstrate proper collection of routine, timed urine and clean catch urine specimens.
16.09	Record fluid intake and output (I&O).
16.10	Observe, record, and report patient's emesis.
16.11	Monitor and provide urinary catheter care and drainage systems.
16.12	Assist with ostomy care including emptying or changing ostomy bags that do not adhere to the skin.
16.13	Collect stool specimen.
16.14	Assist with the collection of a sputum specimen.
16.15	Assist the nurse with care of the patient with complex medical needs.
16.16	Assist patient to apply binders.
16.17	Care for patient in skin and skeletal traction.
16.18	Assist with pre-operative and post-operative patient care.
16.19	Reinforce dressings under the supervision of the RN/LPN.
16.20	Obtain and record an apical pulse.
16.21	Provide cast care and/or pin care.
16.22	Provide care for eyeglasses, artificial eyes, and contact lens.
17.0	Apply principles of nutrition. The student will be able to:
17.01	Identify nutrients and food groups.
17.02	Develop a basic food plan.
17.03	Describe special diets.

	17.04 Check patient's diet tray for accuracy.
	17.05 Monitor and document Nutritional Intake.
	17.06 Identify and implement regional, cultural and religious food guidelines/preferences.
	17.07 Demonstrate knowledge of the need for thickened liquids and fluid consistency.
	17.08 Identify methods of maintaining fluid balance including encouraging and restricting fluids.
18.0	Provide care for geriatric patients. The student will be able to:
	18.01 Identify and assist with methods and procedures to prevent pressure ulcers.
	18.02 Identify and assist with methods to prevent falls in the elderly.
	18.03 Identify and assist with safety principles as related to the elderly.
	18.04 Describe general characteristics, particular needs, and age related changes of the elderly.
	18.05 Identify attitudes and living habits that promote positive mental and physical health for the elderly.
	18.06 Distinguish between fact and fallacy about the aging process.
	18.07 Apply reality orientation techniques and validation therapy unless it is contraindicated by the patient diagnosis.
	18.08 Recognize and respond appropriately to symptoms of common diseases, including dementia, depression/suicide and Alzheimers.
	18.09 Provide and involve patients in diversional activities.
	18.10 Identify common alterations in elderly patient behavior.
	18.11 Provide care for patients with special needs (e.g., impaired hearing, impaired vision, immobility, impaired body functions, cognitively impaired (dementia)).
	18.12 Demonstrate awareness of common behaviors in drug use and abuse in the elderly.
	18.13 Report concerns to the nurse and appropriate authorities related to drug use and abuse in the elderly patient.
	18.14 Identify the need for community resources and services available to the elderly and their caregiver.
	18.15 Identify components of the grief process.
	18.16 Demonstrate an understanding of end of life care, hospice and palliative care.
19.0	Apply the principles of infection control specific to Nursing Assisting. The student will be able to:

	19.01 Discuss transmission-based precautions.
	19.02 Identify the chain of infection.
	19.03 Provide care for patients with infectious diseases applying the principles of "Standard Precautions" utilized with all patients as well as special procedures required.
	19.04 Apply the proper use of personal protective equipment (PPE) for all types of isolation including donning and removing PPE appropriately.
	19.05 Follow isolation procedure with food tray, PPE, and other supplies/equipment.
	19.06 Collect specimen from patient in isolation.
20.0	Provide biological, psychological, and social support. The student will be able to:
	20.01 Discuss family roles and their significance to health.
	20.02 Respond to patient and family emotional needs.
21.0	Perform supervised organizational functions, following the patient care plan. The student will be able to:
	21.01 Organize and prioritize patient-care assignments.
	21.02 Complete assignments accurately and in a timely manner.
22.0	Assist with restorative (rehabilitative) activities. The student will be able to:
	22.01 List the purposes of restorative (rehabilitation) program.
	22.02 Assist patient with specified restorative (rehabilitation) needs.
	22.03 Assist patients/residents to reach the optimum level of independence.

Course Number: HCP0332
Occupational Completion Point: C
Advanced Home Health Aide – 50 Hours

Students in this module have already completed a Nursing Assistant program. After completing this module, the student will have achieved the occupational completion point of Advanced Home Health Aide (a home health aide who is also a nursing assistant). This program also meets the requirements of Home Health Aide as stated in Rules of the Department of Health and Rehabilitative services, Division of Health, Chapter 10D-68 - Minimum Standards for Home Health Agencies.

Please refer to 42CFR§484 for the clinical and faculty requirements for the Home Health Aide course.

The recommended length of instruction for this module is 50 clock hours but no less than 20. Beginning 1995-96, secondary students who have completed the course 8417210 Nursing Assistant should take this module to become a home health aide.	
23.0	Use verbal and written communications specific to Home Health Aide. The student will be able to:
	23.01 Obtain data from patient and family/significant others.
	23.02 Utilize verbal and written information to contribute to the patient's plan of care.
	23.03 Recognizes cultural differences in family.
24.0	Demonstrate legal and ethical responsibilities specific to Home Health Aide. The student will be able to:
	24.01 Demonstrate legal and ethical behavior within the role and scope of home health aide responsibilities.
	24.02 Follow policies and procedures affecting the health, safety, and well-being of patients in the home setting.
25.0	Perform physical comfort and safety functions specific to Home Health Aide. The student will be able to:
	25.01 Maintain a clean and safe home environment for the patient.
	25.02 Identify emergency evacuation procedures with adaptations to the home setting.
26.0	Apply principles of nutrition specific to Home Health Aide. The student will be able to:
	26.01 List factors that must be considered when purchasing food.
	26.02 List factors that must be considered when storing food.
	26.03 Discuss preparation and serving of trays in the home.
27.0	Apply the principles of infection control specific to Home Health Aide. The student will be able to:
	27.01 Provide care for patients with infectious diseases in the home.
	27.02 Follow isolation procedures with food tray, garments, and other materials in the home.
	27.03 Utilize standard and blood borne precautions in all home care.
28.0	Perform home health-care services. The student will be able to:
	28.01 Follow an established work plan with the patient and family.
	28.02 Perform patient-related cleaning tasks and laundry.
	28.03 Identify methods for medication storage.

28.04	Assist patient with taking self-administered prescribed medication in the home and identify possible side effects and emergency procedures for adverse reactions in accordance with 59A-8.0095, F.A.C.
28.05	Demonstrate how to utilize specified equipment and supplies in the home.

Course Number: HCP0020
Occupational Completion Point: D
Patient Care Assistant – 75 Hours

Students enrolled in this module have previously completed a Nursing Assistant and Home Health Aide program and are adding these skills to work in a health care facility other than a nursing home. The average achieving student should complete this module in 75 clock hours. The occupational completion point Patient Care Assistant can only be achieved when this module is completed plus the modules/or credentials for Home Health Aide and Nursing Assistant are satisfied.

29.0	Perform nursing assistant skills related to the hospital setting. The student will be able to:
29.01	Care for hospital equipment and supplies.
29.02	Transfer patient to stretcher and wheelchair.
29.03	Prepare hot and cold applications for nurse to apply them.
29.04	Assist patient to apply binders.
29.05	Care for patient in skin and skeletal traction.
29.06	Assist with pre-operative and post-operative patient care.
29.07	Reinforce dressings.
29.08	Practice nursing assistant skills in the hospital setting.
30.0	Provide nursing assistant care for the adult patient. The student will be able to:
30.01	Assist with physical examination.
30.02	Care for patients receiving oxygen therapy.
30.03	Change an unsterile dressing.
30.04	Take an apical pulse.
30.05	Take pedal pulse.
30.06	Demonstrate an understanding of artificial eye/contact lens care.

30.07 Demonstrate an understanding and knowledge of needs of patients with common health problems.
30.08 Measure pulse oximetry and report decreasing levels of O_2 saturation.

Course Number: HSC0016 **Occupational Completion Point: E** **Allied Health Assistant – 150 Hours**
Students enrolled in this module have completed the Patient Care Assistant competencies and/or are adding these skills to be a multi-skilled worker. Students will perform skills representative of one to three areas of allied health care in the laboratory and clinical settings. Major areas of allied health are defined as physical therapy, emergency, radiation, laboratory and respiratory medicine, and occupational therapy. Other areas of health, medicine, dentistry, or veterinary may be included with instructor provided competencies**. Such teacher made competencies must remain at the aide level and not go beyond the scope of practice of unlicensed assistive personnel. Invasive procedures that fall into the nursing scope of practice are not to be added**. Clinical experience is defined as activities performed in the clinical setting under the supervision of the appropriate health professional. School certificates for this module must be for "Allied Health Assistant". Specific competencies should be listed on the back of the certificate.
31.0 Perform aide level skills representative of 1 to 3 major allied health areas in the school laboratory before beginning the clinical phase. The student will be able to:
31.01 Perform skills related to the body systems.
31.02 If unlicensed physical restorative type skills are to be taught, students will be able to:
• Describe the functions of bones and muscles as related to the practice of physical therapy.
• Define disability and identify types of disabilities.
• Describe equipment used in physical therapy.
• Teach crutch and walker use and care.
• Perform safe body mechanics and transfer techniques.
• Demonstrate an understanding of the use of modalities and practice of physical therapy (i.e., Ultrasound, heat and cold therapeutic massage, E-STEM, wound care, elastic stockings).
• Perform communication skills specifically related to physical therapy.
• Assist clients to eat using prompting techniques in the use of adaptive feeding devices.
• Identify augmented communication devices and describe the purpose of each.
• Demonstrate techniques used in active and passive range of motion exercises.

• Instruct patients in bed/wheelchair mobility activities.
• Describe the relationship between long-term and short-term goals.
31.03 If unlicensed occupational restorative type skills are to be taught, students will be able to:
• Describe, name, and discuss the avenues of occupational therapy practice and the equipment used.
• Perform feeding and dressing skills using one hand and/or adaptive equipment.
• Perform communication skills specifically related to occupational therapy.
• Perform and instruct range of motion exercises.
• Train the client in clothing care skills.
• Train the client in food preparation skills.
• Demonstrate an understanding of assisting the client in money management skills.
31.04 If unlicensed respiratory restorative type skills are to be taught, students will be able to:
• Name and discuss the avenues of Respiratory Care Practice.
• Describe common respiratory diseases (asthma, emphysema, chronic bronchitis, and atelectasis) and common medications used to treat respiratory diseases.
• Assemble and practice using gas reducing and flow regulating equipment.
• Demonstrate and discuss the use of incentive spirometers.
• Differentiate between various oxygen-delivery devices (nasal cannulas, simple and rebreathing masks, oxyhoods, enclosures.
• Stock shelves with, process, and perform preventative maintenance on respiratory care equipment.
• Check emergency equipment assigned to respiratory care.
• Demonstrate/discuss the use of postural drainage and percussion.
• Discuss and practice the use of the pulse oximeter.
• Describe the equipment and use of humidity/aerosol.
31.05 If medical administrative assisting type skills is one of the selected allied health areas to be taught, students will:
• Demonstrate an understanding of basic medical terminology e.g., prefixes, suffixes, and root words related to major body

	systems.
	• Demonstrate an understanding of straight numerical, alphabetical and terminal digit filing.
	• Demonstrate computer literacy, keyboarding and retrieval skills.
	• List procedures for scheduling and referring patients, and handling walk-in emergency patients.
	• Understand what is required to create and submit a medical bill.
	• Define a Release of Medical Information, Explanation of Benefit, Assignment of Benefit and Electronic Remittance Advice
	• Develop and understanding of the term HMO and be able to interpret the information contained on the patient's insurance card.
	• Understand the financial terms and procedures involved in operating a medical office practice, including Income, Expense, Accounts Receivable, Accounts payable, Cash and Accrual Accounting, Write-off Adjustments.
31.06	If unlicensed radiologic type skills are to be taught, students will:
	• Identify the function of a cassette, film, and screen.
	• Describe how radiation produces an image on film.
	• Identify the process by which x-ray film is developed.
	• Process a film through an automatic processor.
	• Identify anatomical position and terminology related to position (supine, prone, proximal, distal, medial, lateral, superior, inferior, anterior/ventral, oblique, and posterior/dorsal).
	• Identify patient properly (check identification band, etc.).
	• Explain appropriate exam(s) to the patient.
	• Perform safe body mechanics and transferring skills of patient onto x-ray table.
	• Position patient for exam(s) (chest, KUB, hand, and foot).
	• Position x-ray tube to simulate exposure for exam(s) (chest, KUB, hand, and foot).
	• Use an artificial arm to perform venipuncture.
31.07	If unlicensed electrocardiograph aide type skills are to be taught, students will:
	• Describe the cardiovascular system.

	• Demonstrate knowledge of, apply and use medical instrumentation modalities.
	• Demonstrate knowledge of the use of electrocardiographic equipment on patients who have special needs and considerations.
	• Perform patient care techniques in the health care facility.
	• Demonstrate knowledge of telemetry application,
	• Assist with the patient care of patients undergoing ambulatory monitoring and stress testing.
	• Demonstrate knowledge of patient care of patients with pacemakers and implanted defibrillators.
	• Identify legal and ethical responsibilities of an EKG/ECG monitor technician.
	• Recognize normal and abnormal monitoring.
31.08	If unlicensed phlebotomy aide type skills are to be taught, students will:
	• Demonstrate accepted professional communication and interpersonal skills of a phlebotomist.
	• Discuss phlebotomy in relation to the health care setting.
	• Identify the anatomic structure and function of body systems in relation to services performed by phlebotomist.
	• Recognize and identify collection reagents, supplies, equipment and interfering chemical substances.
	• Demonstrate skills and knowledge necessary to perform phlebotomy.
	• Practice accepted procedures of transporting, accessioning and processing specimens.
	• Practice quality assurance and safety.
31.09	If unlicensed geriatric type skills are to be taught, (for students completing nurse assisting only) students will:
	• Recognize types of long term care facilities and levels of care.
	• Be familiar with legislation affecting long term care.
	• Discuss physical and emotional effects of aging and appropriate ways of dealing with them.
	• Recognize the stages of dementia and the care of residents in each stage.
	• Discuss reality orientation, reminiscing, and validation therapy.
	• Describe the effects of aging on nutritional needs.

	• Provide for the safety of the elderly and chronically ill patient, including prevention of falls, prevention of infections, provision of a safe environment and prompt attendance to patients' needs.
	• Check integrity of patient's skin condition and take appropriate actions when needed.
	• Recognize common chronic illnesses and the special care required.
	• Provide appropriate end of life care.
	• Have a knowledge of common medications taken by the elderly and chronically ill, their effects, and side effects.
32.0	Successfully complete a clinical rotation in 1-3 major allied health areas. The student will be able to:
32.01	Demonstrate skills in the clinical setting as outlined in 32.0.
32.02	Complete clinical rotations under the supervision of a duly licensed/certified allied health care or nursing professional.
32.03	Exhibit behavior consistent with the professional ethics required of each of the allied health areas being studied.

Course Number: MEA0580
Occupational Completion Point: F
Advanced Allied Health Assistant – 100 Hours

Students enrolled in this module have completed the Patient Care Assistant and Allied Health Assistant competencies and/or are adding these skills to be a more multi-skilled worker. Students will perform skills representative of one to three areas of allied health care in the laboratory and clinical settings. Major areas of allied health are defined as physical therapy, emergency, radiation, laboratory and respiratory medicine, and occupational therapy. Other areas of health, medicine, dentistry, or veterinary may be included with instructor provided competencies**. Such teacher made competencies must remain at the aide level and not go beyond the scope of practice of unlicensed assistive personnel. Invasive procedures that fall into the nursing scope of practice are not to be added**. Clinical experience is defined as activities performed in the clinical setting under the supervision of the appropriate health professional. School certificates for this module must be for "Advanced Allied Health Assistant". Specific competencies should be listed on the back of the certificate.

33.0	Perform additional skills from the previous module which are in the aide level and do not go beyond the scope of practice of unlicensed assistive personnel.
34.0	Successfully complete a clinical rotation in the selected major allied health area. The student will be able to:
34.01	Demonstrate skills in the clinical setting as outlined in 32.0.
34.02	Complete clinical rotations under the supervision of a duly licensed/certified allied health care or nursing professional.
34.03	Exhibit behavior consistent with the professional ethics required of each of the allied health areas being studied.

Course Number: PRN0094 **Occupational Completion Point: G** **Patient Care Technician – 60 Hours**	
Students enrolled in this module MUST have completed ALL modules in this program. Upon completion they will be prepared as the cross trained unlicensed worker known as the Patient Care Technician (Industry Title).	
35.0	Demonstrate knowledge of organizational and effective team member skills. The student will be able to:
	35.01 Define terms associated with organizational and time management skills.
	35.02 Discuss the role of unlicensed assistive personnel (UAP's) in relation to the terms in 36.01.
	35.03 Discuss various situations when a Patient Care Technician would utilize organizational skills.
	35.04 List the characteristics of an effective team member.
	35.05 Discuss the chain of command and characteristics of team member relationships.
	35.06 Perform a self-evaluation.
36.0	Practice organizational and effective team member skills in a clinical setting. The student will be able to:
	36.01 Demonstrate ways to deal with conflict.
	36.02 Demonstrate employability skills specific to patient care technician.
	36.03 Demonstrate communication skills that are supportive of team members.
	36.04 Demonstrate effective time management skills.
	36.05 Give and receive end-of-shift reports to team members.

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as, experimental, quality, and safety procedures are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate and troubleshoot equipment/tools used to make observations. Students understand measurement error; and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

Special Notes

This program also meets the requirements of Home Health Aide as stated in Rules of the Department of Health and Rehabilitative services, Division of Health, Chapter 10D-68 - Minimum Standards for Home Health Agencies.

Please refer to 42CFR§484 for the clinical and faculty requirements for the Home Health Aide course.

This program meets the Department of Health's education requirements for HIV/AIDS, Domestic Violence and Prevention of Medical Errors. Although not a requirement for initial licensure, it is a requirement for renewal, therefore the instructor **may** provide a certificate for renewal purposes to the student verifying these requirements have been met.

If students in this program are seeking a licensure, certificate or registration through the Department of Health, please refer to 456.0635, F.S. for more information on disqualification for a license, certificate, or registration through the Department of Health.

A voluntary Certified Patient Care Technician (CPCT) national Examination is available through the:

National Healthcare Association http://www.nhanow.com/
7500 West 160th Street, Stilwell, Kansas 66085
Phone: 973-605-1881, Toll Free: (800) 499-9092, FAX: (913) 661-6291

Completion of this program should enable the postsecondary student to be given advanced standing in the Practical Nursing program H170607.

The Core should be taken first in the program. Following the successful completion of the core, the student is eligible to take the National Health Care Foundation Skill Standards Assessment with instructor approval and the completion of a portfolio.

Career and Technical Student Organization (CTSO)

CTSOs are co-curricular career and technical student organizations providing leadership training and reinforcing specific career and technical skills. Career and Technical Student Organizations provide activities for students as an integral part of the instruction offered. Other CTSOs not listed in

this curriculum framework or recognized by the Florida Department of Education are permissible provided they support student mastery over the standards and benchmarks of this curriculum framework.

Cooperative Training – OJT

On-the-job training is appropriate but not required for this program. Whenever offered, the rules, guidelines, and requirements specified in the OJT framework apply.

Basic Skills

In Career Certificate programs offered for 450 hours or more, in accordance with Rule 6A-10.040, F.A.C., the minimum basic skills grade levels required for postsecondary adult career and technical students to complete this program are: Computation (Mathematics) and Communications (Reading and Language Arts). These grade level numbers correspond to a grade equivalent score obtained on a state designated basic skills examination.

Adult students with disabilities, as defined in Section 1004.02, Florida Statutes, may be exempted from meeting the Basic Skills requirements (Rule 6A-10.040). Students served in exceptional student education (except gifted) as defined in s. 1003.01, F.S., may also be exempted from meeting the Basic Skills requirement. Each school district and Florida College System Institution must adopt a policy addressing procedures for exempting eligible students with disabilities from the Basic Skills requirement as permitted in Section 1004.91, F.S.

Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

Note: postsecondary curriculum and regulated secondary programs cannot be modified.

Florida Department of Education
Curriculum Framework

Program Title: **Optometric Assisting**
Program Type: **Career Preparatory**
Career Cluster: **Health Science**

Career Certificate Program		
Program Number	H170705	
CIP Number	0351180203	
Grade Level	30, 31	
Program Length	1080 hours	
Teacher Certification	Refer to the **Program Structure** section.	
CTSO	HOSA	
SOC Codes (all applicable)	For program SOC codes, please see the Program and Course Tables section of the CTE Program Resources page linked below.	
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml	
Basic Skills Level	Computation (Mathematics): 9	Communications (Reading and Language Arts): 11

Purpose

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Health Science career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of Health Science career cluster.

The purpose of this program is to prepare students for employment as optometric assistants or Opticians, Dispensing.

The content includes but is not limited to basic instruction in anatomy and physiology, CPR, Heartsaver, office practices and dispensing of visual devices. Because optometrists now deal with certain drugs, students need knowledge of diagnostic and therapeutic drugs under supervision.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Program Structure

This program is a planned sequence of instruction consisting of 2 occupational completion points.

This program is comprised of courses which have been assigned course numbers in the SCNS (Statewide Course Numbering System) in accordance with Section 1007.24 (1), F.S. Career and Technical credit shall be awarded to the student on a transcript in accordance with Section 1001.44(3) (b), F.S.

To teach the courses listed below, instructors must hold at least one of the teacher certifications indicated for that course.

The following table illustrates the postsecondary program structure:

OCP	Course Number	Course Title	Teacher Certification	Length
A	OPT0720	Foundations of Vision Care	TEC OPTICS 7G OPTOM ASST 7 G	102 hours
B	OPT0721	Optometric Assistant 1		336 hours
	OPT0722	Optometric Assistant 2		642 hours

Florida's Career Readiness Skills for CTE Programs

Employability Skills	
01.0	Apply academic skills to workplace scenarios.
01.01	Use reading skills.
01.02	Use writing skills.
01.03	Use mathematical strategies and procedures.
01.04	Use scientific principles and procedures.
02.0	Design a solution to an industry problem.
02.01	Use critical thinking.
02.02	Use creativity.
02.03	Make sound decisions.
02.04	Solve problems.
02.05	Reason.
02.06	Plan and organize.
03.0	Manage resources within an industry project
03.01	Manage time.
03.02	Manage money or resources.
03.03	Manage materials.
03.04	Manage personnel.
04.0	Oversee the subcomponents, operations and output of a technical or organizational system.
04.01	Manage systems.
04.02	Monitor systems.
04.03	Improve systems.
05.0	Use information for decision making.
05.01	Locate information.
05.02	Organize information.
05.03	Use information.

	05.04 Analyze information.
	05.05 Communicate information.
06.0	Apply relevant technology to workplace scenarios to aid productivity.
	06.01 Use technology.
07.0	Interpret and express interpersonal communication.
	07.01 Communicate verbally.
	07.02 Listen actively.
	07.03 Comprehend written material.
	07.04 Convey information in writing.
	07.05 Communicate nonverbally.
	07.06 Interpret nonverbal communication.
08.0	Interact with others to accomplish workplace goals.
	08.01 Collaborate with others in a team.
	08.02 Respond to customer needs.
	08.03 Exercise leadership.
	08.04 Negotiate to resolve conflict.
	08.05 Respect others.
09.0	Manage personal behavior to maximize productivity and professional growth.
	09.01 Demonstrate responsibility and self-discipline.
	09.02 Adapt and show flexibility.
	09.03 Work independently.
	09.04 Demonstrate a willingness to learn.
	09.05 Demonstrate integrity.
	09.06 Demonstrate professionalism.
	09.07 Take initiative.
	09.08 Display positive attitude.
	09.09 Take responsibility for professional growth.

Job Attainment	
10.0	Find, assess and apply to job opportunities.
10.01	Identify online job posts relevant to his or her career aspirations.
10.02	Compare and contrast the job posts' required qualifications, job duties, compensation, benefits and employers.
10.03	Define what information, documentation and writing prompts are required for the positions.
11.0	Communicate personal competence, character and fit for a job opportunity.
11.01	Develop a resume.
11.02	Write a cover letter.
11.03	Curate a professional portfolio that includes work products.
11.04	Prepare for and experience a mock job interview.
12.0	Cultivate and leverage relationships to professionally advance.
12.01	Request a signed reference letter, letter of recommendation and/or an online skill/professionalism endorsement.
12.02	Develop a plan to cultivate a professional digital footprint.
12.03	Develop a networking plan for a specific industry of interest.

Standards

After successfully completing this program, the student will be able to perform the following:

01.0 Demonstrate knowledge of the healthcare delivery system.
02.0 Demonstrate legal and ethical responsibilities.
03.0 Demonstrate the ability to communicate and use interpersonal skills effectively.
04.0 Demonstrate an understanding of health and vision concepts.
05.0 Demonstrate understanding of a prescription.
06.0 Recognize and practice workplace safety and security procedures.
07.0 Recognize and practice infection control procedures.
08.0 Recognize and respond to emergency situations.
09.0 Demonstrate an understanding of information technology applications in the vision care office.
10.0 Demonstrate employability skills.
11.0 Demonstrate knowledge of business management techniques.
12.0 Perform delivery of optical devices.
13.0 Demonstrate knowledge of basic ocular anatomy and physiology.
14.0 Report and record patient information.
15.0 Perform and assist in procedures used in visual testing.
16.0 Perform special procedures.
17.0 Demonstrate knowledge of contact lenses.

Florida Department of Education
Student Performance Standards

Program Title: **Optometric Assisting**
Career Certificate Program Number: **H170705**

Course Number: OPT0720 **Occupational Completion Point: A** **Foundations of Vision Care – 102 Hours**	
01.0	Demonstrate knowledge of the healthcare delivery system. The student will be able to:
01.01	Describe how various social conditions that affect healthcare delivery.
01.02	Recognize victims of various types of abuse and neglect including domestic violence.
01.03	Identify resources to assist victims of abuse and neglect including domestic violence.
02.0	Demonstrate legal and ethical responsibilities. The student will be able to:
02.01	Differentiate between laws and a code of ethics.
02.02	Describe the composition and scope of practice of the vision care team including OD, MD, COA, LDO, and scribe.
02.03	Discuss the American Optometric Association (AOA) Paraoptometric Code of Ethics.
02.04	Demonstrate knowledge of both doctors' and patients' rights and responsibilities.
02.05	Identify qualities and procedures for accurate and legal documentation and record keeping.
02.06	Identify standards of the Health Insurance Portability and Accountability Act (HIPAA).
02.07	Describe the criteria and procedure for properly identifying patients.
02.08	Describe informed consent including implied, verbal, written and need for capacity.
02.09	Explain practices that could result in malpractice, liability, negligence, abandonment, false imprisonment, and fraud.
03.0	Demonstrate the ability to communicate and use interpersonal skills effectively. The student will be able to:
03.01	Identify characteristics of successful and unsuccessful communication including communication styles and barriers.
03.02	Demonstrate basic speaking, active listening skills, and non-verbal skills.
03.03	Compose written communication using correct spelling, grammar, and formatting.

	03.04 Recognize the importance of courtesy and respect for patients and other healthcare workers including diverse age, cultural, economic, ethnic, and religious groups.
	03.05 Use professional telephone etiquette to answer, transfer, and document calls.
04.0	Demonstrate an understanding of health and vision concepts. The student will be able to:
	04.01 Identify the major body systems.
	04.02 Identify the medical conditions that affect eye health.
	04.03 Discuss the adverse effects of alcohol, tobacco, and drug use (legal and illegal) as related to eye health
	04.04 Discuss the adverse effects of poor nutrition and diet as related to eye health.
	04.05 Identify the difference between a vision screening and a comprehensive eye exam.
	04.06 Describe the importance of a comprehensive eye exam.
	04.07 Demonstrate introductory knowledge of the anatomy and physiology of the eye and the vision system.
	04.08 Recognize the difference between a chief complaint and a HPI (History of Present Illness).
	04.09 Identify signs and symptoms that may be sight-threatening to patients.
	04.10 Identify psychological reactions to vision loss including defense mechanisms and grief.
	04.11 Demonstrate knowledge of prefixes, suffixes, and root words in medical and vision terminology.
05.0	Demonstrate understanding of a prescription. The student will be able to:
	05.01 Demonstrate knowledge of introduction to refractive error.
	05.02 Identify the reasons contact lenses and eyewear are prescribed and worn.
	05.03 Identify legal requirements of a prescription.
	05.04 Demonstrate understanding of electronic prescribing.
06.0	Recognize and practice workplace safety and security procedures. The student will be able to:
	06.01 Utilize Occupational Safety and Health Administration (OSHA) safety procedures to identify safe and unsafe working conditions.
	06.02 Describe the importance of securing medical supplies and using user manuals to properly operate equipment.
	06.03 Identify and describe methods in medical error reduction and prevention in the various healthcare settings.

	06.04 Demonstrate proper body mechanics to prevent personal injury.
	06.05 Demonstrate fire, safety, disaster and evacuations procedures.
07.0	Recognize and practice infection control procedures. The student will be able to:
	07.01 Define principles of infection control including standard and transmission-based precautions.
	07.02 Demonstrate knowledge of medical asepsis and practice procedures such as handwashing and using PPE to break the chain of infection.
	07.03 Describe how to dispose correctly of biohazardous materials and sharps according to appropriate government guidelines such as OSHA.
	07.04 Demonstrate knowledge of blood borne diseases, including HIV/AIDS.
08.0	Recognize and respond to emergency situations. The student will be able to:
	08.01 Record vital signs.
	08.02 Obtain and maintain training or certification on cardiopulmonary resuscitation (CPR), automated external defibrillator (AED), and foreign body airway obstruction (FBAO).
09.0	Demonstrate an understanding of information technology applications in the vision care office. The student will be able to:
	09.01 Describe electronic medical technology applications in vision care and how it can be used in vison care.
	09.02 Demonstrate basic computer skills.
	09.03 Type 25 words per minute.
	09.04 Describe office procedures for faxing and copying options.
10.0	Demonstrate employability skills. The student will be able to:
	10.01 Identify personal traits or attitudes desirable in a member of the healthcare team.
	10.02 Identify appropriate professional standards of healthcare workers.
	10.03 Identify characteristics of effective teams and leaders
	10.04 Recognize factors and situations that may lead to conflict with both patients and coworkers, and methods for solutions
	10.05 Discuss laws governing harassment, labor, and employment
	10.06 Identify documents that may be required when applying for a job.

10.07	Write an appropriate resume and cover letter.
10.08	Conduct a job search.
10.09	Complete a job application form correctly.
10.10	Examine possible certifications or licensing in the vision career field for career advancement.

Course Number: OPT0721 Occupational Completion Point: B Optometric Assistant 1 – 336 Hours	
11.0	Demonstrate knowledge of business management techniques. The student will be able to:
11.01	Classify patients for scheduling urgency based on triage concepts.
11.02	Schedule patient appointments and follow up with confirming or canceling them using standard office protocols.
11.03	Demonstrate the ability to receive and process external patient referrals, ensuring al required documentations is complete and appropriately routed.
11.04	Describe laws, regulations, and procedures for maintaining patient files.
11.05	Identify common methods of payment for vision and healthcare services.
11.06	Demonstrate knowledge of criteria and appropriate use of vision vs health insurance.
11.07	Demonstrate knowledge of common insurance terminology.
11.08	Describe the various methods of authorizing insurance.
11.09	Describe the importance of making accurate and timely insurance claims.
11.10	Demonstrate the knowledge of how CPT, ICD, and HCPCS codes are utilized.
11.11	Demonstrate an understanding of billing and collection procedures for current and overdue accounts.
11.12	Practice and maintain office supply control by tracking office, clinical, and pharmaceutical inventory levels on an inventory supply sheet..
12.0	Perform delivery of optical devices. The student will be able to:
12.01	Demonstrate knowledge of lens physics including: • Optical center • Refraction • Reflection

	• Dispersion • Index of refraction • Abbe value • Specific gravity • Prism
12.02	Describe characteristics of convex, concave, and toric lenses and use that knowledge to identify these lenses.
12.03	Describe various lens designs, materials, and options.
12.04	Demonstrate basic knowledge of how lenses are made.
12.05	Neutralize the different types of lenses.
12.06	Perform optical math to interpret prescriptions including: • Transposition • True reading power • Intermediate power • Spherical equivalent • Optical cross • Nominal lens formula • Focal length • Combining and splitting prism
12.07	Demonstrate knowledge of frame material and style selections.
12.08	Interpret frame markings and take manual frame measurements using boxing system.
12.09	Identify patient information needed to make needs-based frame and lens recommendations.
12.10	Assist patients with frame and lens selection.
12.11	Take patient pupillary distance and vertical measurements for appropriate lens designs.
12.12	Identify the information needed on order form for ordering spectacle lenses and frames.
12.13	Adjust and repair spectacles.
12.14	Verify lenses according to ANSI standards, under proper supervision.
12.15	Dispense spectacles under the proper supervision and within the optometric assistant scope of practice.

Course Number: OPT0722 Occupational Completion Point: B Optometric Assistant 2 – 642 Hours	
13.0	Demonstrate knowledge of basic ocular anatomy and physiology. The student will be able to:
	13.01 Demonstrate knowledge of ocular anatomy.
	13.02 Demonstrate knowledge of ocular physiology.
	13.03 Demonstrate knowledge of pathological and functional disorders of the eye.
	13.04 Demonstrate the knowledge of injuries of the eye and recognize sight-threatening emergencies.
	13.05 Correlate general health as it relates to ocular health.
14.0	Report and record patient information. The student will be able to:
	14.01 Properly identify patients, to avoid medical errors.
	14.02 Identify data to be included in a patient history and additional forms that comprise a patient record.
	14.03 Take and record chief complaints and patient histories from patient, parent, and/or caregiver.
	14.04 Use appropriate medical and vision care terminology and abbreviations.
	14.05 Communicate knowledge to patient, family and/or caregiver to assist with the plan of care, as directed by the doctor.
15.0	Perform and assist in procedures used in visual testing. The student will be able to:
	15.01 Explain measure and record visual acuity.
	15.02 Demonstrate knowledge of amplitude of accommodation.
	15.03 Explain measure and record color vision.
	15.04 Explain measure and record stereo acuity.
	15.05 Measure and record pupil evaluation.
	15.06 Explain and evaluate Ocular motility including: • Extra Ocular Motility • Convergence • Cover testing • Worth 4 dot

	15.07 Perform eye drop instillation.
	15.08 Identify instruments and tools used in comprehensive eye exams.
	15.09 Describe the importance of equipment maintenance and perform proper disinfection.
16.0	Perform special procedures. The student will be able to:
	16.01 Measure and record keratometry.
	16.02 Describe various methods of and the importance of retinal imaging.
	16.03 Measure visual field with confrontation and Amsler testing; Identify Humphreys and Goldmann visual field testing procedures.
	16.04 Demonstrate knowledge of slit lamp biomicroscope procedures.
	16.05 Demonstrate knowledge of techniques to evaluate tear film.
	16.06 Demonstrate knowledge of methods of corneal evaluation, including topography and pachymetry.
	16.07 Identify various methods for recording intraocular pressure; measure and record intraocular pressure.
	16.08 Demonstrate knowledge of refraction techniques.
	16.09 Identify types of low vision aids and resources available for those that need it.
	16.10 Demonstrate knowledge of vision therapy.
	16.11 Demonstrate knowledge of diagnostic and therapeutic drugs including knowledge of the color coding system for topical ocular medications.
17.0	Demonstrate knowledge of contact lenses. The student will be able to:
	17.01 Assist patients with contact lens procedures including: • Insertion and removal • Cleaning and care • Compliance of soft and RGP lenses
	17.02 Demonstrate knowledge of the fitting process for both rigid and soft contact lenses.
	17.03 Demonstrate knowledge of the ordering process for contact lenses including the Fairness to Contact Lens Consumers Act and trail lens inventory.
	17.04 Identify contact lens options; manufacturer, brand, design, power, bc, diam, wearing schedule, materials.
	17.05 Demonstrate knowledge of the advantages and disadvantages of various contact lens materials and designs.

17.06 Identify instruments used to verify contact lenses.

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as, experimental, quality, and safety procedures are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate and troubleshoot equipment/tools used to make observations. Students understand measurement error; and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

Special Notes

This program meets the Department of Health's education requirements for HIV/AIDS, Domestic Violence and Prevention of Medical Errors. Although not a requirement for initial licensure, it is a requirement for renewal, therefore the instructor **may** provide a certificate for renewal purposes to the student verifying these requirements have been met.

If students in this program are seeking a licensure, certificate or registration through the Department of Health, please refer to 456.0635, F.S. for more information on disqualification for a license, certificate, or registration through the Department of Health.

Students are prepared to assist in performing tests to determine defects in vision, preparing and fitting eyeglasses and contact lenses, and administering corrective eye exercises and other treatments under the supervision of a person licensed under 458, 459, 463 or 484, F.S.

This program focuses on broad, transferable skills and stresses understanding and demonstration of the following elements of the health care industry; planning, management, finance, technical and production skills, underlying principles of technology, labor issues, community issues and health, safety, and environmental issues.

Career and Technical Student Organization (CTSO)

CTSOs are co-curricular career and technical student organizations providing leadership training and reinforcing specific career and technical skills. Career and Technical Student Organizations provide activities for students as an integral part of the instruction offered. Other CTSOs not listed in this curriculum framework or recognized by the Florida Department of Education are permissible provided they support student mastery over the standards and benchmarks of this curriculum framework.

Cooperative Training – OJT

On-the-job training is appropriate but not required for this program. Whenever offered, the rules, guidelines, and requirements specified in the OJT framework apply.

Basic Skills

In Career Certificate programs offered for 450 hours or more, in accordance with Rule 6A-10.040, F.A.C., the minimum basic skills grade levels required for postsecondary adult career and technical students to complete this program are: Computation (Mathematics) and Communications (Reading and Language Arts). These grade level numbers correspond to a grade equivalent score obtained on a state designated basic skills examination.

Adult students with disabilities, as defined in Section 1004.02, Florida Statutes, may be exempted from meeting the Basic Skills requirements (Rule 6A-10.040). Students served in exceptional student education (except gifted) as defined in s. 1003.01, F.S., may also be exempted from meeting the Basic Skills requirement. Each school district and Florida College System Institution must adopt a policy addressing procedures for exempting eligible students with disabilities from the Basic Skills requirement as permitted in Section 1004.91, F.S.

Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

Note: postsecondary curriculum and regulated secondary programs cannot be modified.

Florida Department of Education
Curriculum Framework

Program Title: **Orthopedic Technology**
Program Type: **Career Preparatory**
Career Cluster: **Health Science**

Career Certificate Program		
Program Number	H170800	
CIP Number	0351092300	
Grade Level	30, 31	
Program Length	800 hours	
Teacher Certification	Refer to the **Program Structure** section.	
CTSO	HOSA	
SOC Codes (all applicable)	For program SOC codes, please see the Program and Course Tables section of the CTE Program Resources page linked below.	
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml	
Basic Skills Level	Computation (Mathematics): 10	Communications (Reading and Language Arts): 10

Purpose

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Health Science career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of Health Science career cluster.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Program Structure

This program is a planned sequence of instruction consisting of 2 occupational completion points.

This program is comprised of courses which have been assigned course numbers in the SCNS (Statewide Course Numbering System) in accordance with Section 1007.24 (1), F.S. Career and Technical credit shall be awarded to the student on a transcript in accordance with Section 1001.44(3) (b), F.S.

To teach the courses listed below, instructors must hold at least one of the teacher certifications indicated for that course.

The following table illustrates the postsecondary program structure:

OCP	Course Number	Course Title	Teacher Certification	Length
A	HSC0003	Basic Healthcare Worker	Ortho Tech 7 G REG NUR Ortho 7 G	90 hours
	PHT0090	Orthopedic Technologist 1		355 hours
B	PHT0091	Orthopedic Technologist 2		355 hours

Florida's Career Readiness Skills for CTE Programs

Employability Skills	
01.0	Apply academic skills to workplace scenarios.
01.01	Use reading skills.
01.02	Use writing skills.
01.03	Use mathematical strategies and procedures.
01.04	Use scientific principles and procedures.
02.0	Design a solution to an industry problem.
02.01	Use critical thinking.
02.02	Use creativity.
02.03	Make sound decisions.
02.04	Solve problems.
02.05	Reason.
02.06	Plan and organize.
03.0	Manage resources within an industry project
03.01	Manage time.
03.02	Manage money or resources.
03.03	Manage materials.
03.04	Manage personnel.
04.0	Oversee the subcomponents, operations and output of a technical or organizational system.
04.01	Manage systems.
04.02	Monitor systems.
04.03	Improve systems.
05.0	Use information for decision making.
05.01	Locate information.
05.02	Organize information.
05.03	Use information.

	05.04 Analyze information.
	05.05 Communicate information.
06.0	Apply relevant technology to workplace scenarios to aid productivity.
	06.01 Use technology.
07.0	Interpret and express interpersonal communication.
	07.01 Communicate verbally.
	07.02 Listen actively.
	07.03 Comprehend written material.
	07.04 Convey information in writing.
	07.05 Communicate nonverbally.
	07.06 Interpret nonverbal communication.
08.0	Interact with others to accomplish workplace goals.
	08.01 Collaborate with others in a team.
	08.02 Respond to customer needs.
	08.03 Exercise leadership.
	08.04 Negotiate to resolve conflict.
	08.05 Respect others.
09.0	Manage personal behavior to maximize productivity and professional growth.
	09.01 Demonstrate responsibility and self-discipline.
	09.02 Adapt and show flexibility.
	09.03 Work independently.
	09.04 Demonstrate a willingness to learn.
	09.05 Demonstrate integrity.
	09.06 Demonstrate professionalism.
	09.07 Take initiative.
	09.08 Display positive attitude.
	09.09 Take responsibility for professional growth.

Job Attainment	
10.0	Find, assess and apply to job opportunities.
10.01	Identify online job posts relevant to his or her career aspirations.
10.02	Compare and contrast the job posts' required qualifications, job duties, compensation, benefits and employers.
10.03	Define what information, documentation and writing prompts are required for the positions.
11.0	Communicate personal competence, character and fit for a job opportunity.
11.01	Develop a resume.
11.02	Write a cover letter.
11.03	Curate a professional portfolio that includes work products.
11.04	Prepare for and experience a mock job interview.
12.0	Cultivate and leverage relationships to professionally advance.
12.01	Request a signed reference letter, letter of recommendation and/or an online skill/professionalism endorsement.
12.02	Develop a plan to cultivate a professional digital footprint.
12.03	Develop a networking plan for a specific industry of interest.

Standards

After successfully completing this program, the student will be able to perform the following:

01.0 Demonstrate knowledge of the health care delivery system and health occupations.
02.0 Demonstrate the ability to communicate and use interpersonal skills effectively.
03.0 Demonstrate legal and ethical responsibilities.
04.0 Demonstrate an understanding of and apply wellness and disease concepts.
05.0 Recognize and practice safety and security procedures.
06.0 Recognize and respond to emergency situations.
07.0 Recognize and practice infection control procedures.
08.0 Demonstrate an understanding of information technology applications in healthcare.
09.0 Demonstrate employability skills.
10.0 Demonstrate knowledge of blood borne diseases, including HIV/AIDS.
11.0 Apply basic math and science skills.
12.0 Describe anatomical structure and function of the human body related to the practice of orthopedics.
13.0 Discuss diseases and injuries of the musculoskeletal system and related structures.
14.0 Demonstrate physical assessment of the orthopedic patient.
15.0 Perform routine maintenance of equipment.
16.0 Disinfect and sterilize materials and equipment.
17.0 Demonstrate knowledge of the use of radiology in orthopedic technology.
18.0 Demonstrate ability to apply, adjust, and remove all common orthopedic devices.
19.0 Assist the orthopedic physician with various treatments and procedures.
20.0 Assist the orthopedic surgeon in the operating room using aseptic technique.
21.0 Demonstrate use of exercise, assistive/supportive devices and specialized equipment.
22.0 Instruct other healthcare providers, patients and families to perform selected treatment procedures and functional activities.
23.0 Identify architectural barriers.

Florida Department of Education
Student Performance Standards

Program Title: **Orthopedic Technology**
Career Certificate Program Number: **H170800**

The **Basic Health Care Worker (HSC0003)** is referred to as the **Health Science Core** and is the first OCP in the majority of the Career Certificate Program health science programs. Secondary and Postsecondary students completing the health science core will not have to repeat the core in any other health science program in which it is a part. When the recommended sequence is followed, the structure allows students to complete at specified points for employment or remain for advanced training or cross-training.

Course Number: HSC0003
Occupational Completion Point: A
Basic Healthcare Worker – 90 Hours

To ensure consistency whenever these courses are offered, the health science core standards (1-11) and benchmarks have been placed in a separate document. To access this document, visit this link:
https://www.fldoe.org/file/20894/health-sci-core-psav-cc-2627.rtf

Course Number: PHT0090
Occupational Completion Point: B
Orthopedic Technologist 1 – 355 Hours

12.0	Describe anatomical structure and function of the human body related to the practice of orthopedics. The student will be able to:
12.01	Describe the composition, properties and functions of connective tissue.
12.02	Discuss the generalized functions of the skeletal system.
12.03	Identify the major anatomical structures found in a typical long bone.
12.04	Discuss the microscopic structure of bones and cartilage.
12.05	Explain how bones are formed, grow and remodeled.
12.06	Identify the two major subdivisions of the skeleton and list the bones found in each area.
12.07	List and compare the major types of joints in the body.
12.08	Identify and discuss the structure and function of the three major types of muscle tissue.
12.09	Discuss the microscopic structure of a skeletal muscle.

	12.10 Explain muscle stimulation, movement and contraction.
	12.11 Identify the major muscles of the body and their primary function.
	12.12 Discuss the most common types of movement produced by skeletal muscles.
	12.13 Describe the role of tendons and ligaments in the musculoskeletal system.
13.0	Discuss diseases and injuries of the musculoskeletal system. The student will be able to:
	13.01 Explain the body's general response to injury.
	13.02 Discuss the process of tissue healing.
	13.03 Describe the pathophysiology of connective tissue diseases and degenerative joint disorders.
	13.04 Discuss the assessment and treatment of patients with connective tissue diseases and joint disorders.
	13.05 Identify the various types of joint replacement.
	13.06 Discuss the role of the orthopedic technician in pre and post-operative care and therapy of joint replacement patients.
	13.07 Discuss the common types of strains and sprains and treatment procedures.
	13.08 Classify the different types of bone fractures.
	13.09 Describe the physiological stages that occur in bone healing.
	13.10 Discuss the major complications of fractures, their signs and symptoms and management.
	13.11 Compare the types of medical treatment for fractures including reduction and fixation.
	13.12 Describe common therapeutic measures for fractures including casts, splints, immobilizers, traction, crutches, walkers, and canes.
	13.13 Describe specific types of fractures regarding their location in the body.
14.0	Demonstrate physical assessment of the orthopedic patient. The student will be able to:
	14.01 Interview patient and family in order to obtain a complete history of the patient's complaints/conditions by using effective interviewing techniques.
	14.02 Conduct physical examination of the patient in order to provide pertinent information to the physician by using standard examination techniques.
	14.03 Identify critical elements to include with documentation of physical assessment of the patient.

	14.04 Use correct medical terminology and proper techniques to document orthopedic conditions or complications on the patient's chart.
15.0	Perform routine maintenance of equipment. The student will be able to:
	15.01 Assemble, inspect, adjust and disassemble orthopedic equipment such as, frames, weights, cables, pulleys, and other support devices as needed.
	15.02 Clean, organize, and maintain adequate levels of orthopedic equipment for use.
	15.03 Complete repair order forms for broken equipment.
16.0	Disinfect and sterilize materials and equipment. The student will be able to:
	16.01 Discuss the principles of infection control, aseptic technique, and sterilization.
	16.02 Disinfect used equipment and materials using proper antiseptics and disinfectants.
	16.03 Prepare materials and equipment for sterilization.
17.0	Demonstrate knowledge of the use of radiology in orthopedic technology. The student will be able to:
	17.01 Discuss the history of radiology and its application in orthopedics.
	17.02 Explain the basics of radiographic image production and the various types of permanent imaging relating to orthopedics.
	17.03 Demonstrate the ability to interpret simple fractures and dislocations on radiographic film.
	17.04 Discuss the role of the orthopedic technologist in obtaining and examining radiographs.

Course Number: PHT0091 **Occupational Completion Point: B** **Orthopedic Technologist 2 – 355 Hours**	
18.0	Demonstrate ability to apply, adjust, and remove all common orthopedic devices in order to comply with physician's orders. The student will be able to:
	18.01 Discuss the different types of materials and their properties used in constructing casts, splints and immobilizers.
	18.02 Identify the various types of upper and lower extremity casts/splints applicable to specific orthopedic conditions requiring treatment.
	18.03 Apply upper extremity cast/splint to patient using accepted casting/splinting practices and techniques.
	18.04 Apply lower extremity cast/splint to patient using accepted casting/splinting practices.
	18.05 Discuss the specific orthopedic conditions associated with torso casts/splints and specialty casts/splints.

	18.06 Apply specialty cast/splint to patient using accepted casting/splinting practices and techniques.
	18.07 Describe the complications associated with casting/splinting.
	18.08 Utilize cast/splint removal equipment to remove casts/splints using accepted practices and techniques.
	18.09 Utilize cast/splint removal equipment to perform specific procedures, using wedging, windowing, and uni/bivalving techniques.
	18.10 Apply orthopedic devices to patient by ensuring proper fit and placement.
	18.11 Apply pre-fabricated orthotics and orthopedic appliances to patient by ensuring proper fit.
19.0	Assist the orthopedic physician with various treatments and procedures. The student will be able to:
	19.01 Obtain equipment in order to apply traction therapy to patient by selecting appropriate items for the traction apparatus.
	19.02 Demonstrate ability to construct the specific type of traction ordered.
	19.03 Apply traction apparatus to bed in order to prepare for application of skin or skeletal traction by using accepted practices and techniques.
	19.04 Drape, scrub, and assist in the application of skeletal traction therapy using accepted aseptic practices and techniques.
	19.05 Apply skin traction therapy to patient using accepted aseptic practices and techniques.
	19.06 Discuss the various types of traction applicable to specific orthopedic conditions requiring traction.
	19.07 Explain the basic biomechanics of traction therapy.
	19.08 Describe the contraindications associated with traction therapy.
	19.09 Assist in discontinuing traction therapy using accepted practices and techniques.
20.0	Assist the orthopedic surgeon using aseptic technique. The student will be able to:
	20.01 Assist the surgeon during reductions by supplying and applying the appropriate materials.
	20.02 Apply and manage post-operative dressing on wounds following aseptic practices and techniques.
21.0	Demonstrate use of exercise, assistive/supportive devices and specialized equipment. The student will be able to:
	21.01 Describe the benefits of exercise, stretching, conditioning and strength training in rehabilitative therapy.
	21.02 Recognize and assist in exercising techniques used in orthopedic therapy.
	21.03 Discuss, demonstrate and teach the proper use of canes, crutches and walkers.

	21.04 Describe and demonstrate the various types of wheelchairs and their use.
	21.05 Perform safe body mechanics and patient transfer techniques.
	21.06 Define orthotics and state the importance of proper fit.
	21.07 Discuss upper and lower extremity prosthetics in terms of types of amputations and prosthetics available.
	21.08 Identify and find solutions for common problems associated with prosthetic management.
	21.09 Assist and instruct patients in the use of orthotic/prosthetic devices.
22.0	Instruct other healthcare providers, patients and families to perform selected treatment procedures and functional activities. The student will be able to:
	22.01 Explain specific treatment plans for patients to all parties involved.
	22.02 Describe desired outcomes of selected treatment procedures or functional activities.
	22.03 Detail the types and functions of equipment being used in treatment of patients and their application.
	22.04 Discuss safety issues and proper procedural methods concerning use of orthopedic equipment and treatment protocol.
23.0	Identify architectural barriers. The student will be able to:
	23.01 Identify environmental factors that are potential architectural barriers.
	23.02 Determine which aspects of the patient's functional level and their ambulatory/mobility equipment are subject to architectural problems.
	23.03 Describe action required to remediate barriers.

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as, experimental, quality, and safety procedures are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate and troubleshoot equipment/tools used to make observations. Students understand measurement error; and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

Special Notes

The Core should be taken first in the program. Following the successful completion of the core, the student is eligible to take the National Health Care Foundation Skill Standards Assessment with instructor approval and the completion of a portfolio.

The graduate of this program is prepared to make application for certification by examination to the:
National Board for Certification of Orthopaedic Technologists (NBCOT), Inc.
4736 Onondaga Blvd., #166, Syracuse, NY 13219, (866) 466-2268
TO EARN CERTIFICATION AS A ORTHOPEDIC TECHNOLOGIST CERTIFIED (OTC)

OR
The American Society of Orthopedic Professionals (ASOP)
700 Beach Drive NE, Suite 103, St. Petersburg, FL 33701, (727) 394-1700
TO EARN CERTIFICATION AS A REGISTERED ORTHOPEDIC TECHNOLOGIST (ROT)

Career and Technical Student Organization (CTSO)

CTSOs are co-curricular career and technical student organizations providing leadership training and reinforcing specific career and technical skills. Career and Technical Student Organizations provide activities for students as an integral part of the instruction offered. Other CTSOs not listed in this curriculum framework or recognized by the Florida Department of Education are permissible provided they support student mastery over the standards and benchmarks of this curriculum framework.

Cooperative Training – OJT

On-the-job training is appropriate but not required for this program. Whenever offered, the rules, guidelines, and requirements specified in the OJT framework apply.

Basic Skills

In Career Certificate Programs offered for 450 hours or more, in accordance with Rule 6A-10.040, F.A.C., the minimum basic skills grade levels required for postsecondary adult career and technical students to complete this program are: Computation (Mathematics) and Communications (Reading and Language Arts). These grade level numbers correspond to a grade equivalent score obtained on a state designated basic skills examination.

Adult students with disabilities, as defined in Section 1004.02, Florida Statutes, may be exempted from meeting the Basic Skills requirements (Rule 6A-10.040). Students served in exceptional student education (except gifted) as defined in s. 1003.01, F.S., may also be exempted from meeting the Basic Skills requirement. Each school district and Florida College System Institution must adopt a policy addressing procedures for exempting eligible students with disabilities from the Basic Skills requirement as permitted in Section 1004.91, F.S.

Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

Note: postsecondary curriculum and regulated secondary programs cannot be modified.

Florida Department of Education
Curriculum Framework

Program Title: **Emergency Medical Responder**
Program Type: **Career Preparatory**
Career Cluster: **Health Science**

Career Certificate Program	
Program Number	H171500
CIP Number	0351081000
Grade Level	30, 31
Program Length	190 hours
Teacher Certification	Refer to the **Program Structure** section.
CTSO	HOSA
SOC Codes (all applicable)	For program SOC codes, please see the Program and Course Tables section of the CTE Program Resources page linked below.
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml
Basic Skills Level	N/A

Purpose

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Health Science career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of Health Science career cluster.

The content includes but is not limited to planning, management, finance, technical and production skills, underlying principles of technology, labor issues, community issues and health, safety, and environmental issues. Clinical learning experiences are an integral part of this program.

This is an instructional program that prepares individuals to provide initial care to sick or injured persons or as ambulance drivers and attendants. An Emergency Medical Responder may use this training for employment. The Emergency Medical Responder is the first to arrive at the scene of an injury but does not have the primary responsibility for treating and transporting the injured person(s). Emergency Medical Responders may include law enforcement, lifeguard, fire services or basic life support non-licensed personnel who act as part of an organized emergency medical services team.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

"All EMR/EMT/Paramedic students are required to complete the 4-hour Traffic Incident Management Safety (TIMS) course at least once. This requirement can be fulfilled either as a prerequisite or as part of the curriculum, at the discretion of the EMS education program."

Program Structure

This program is a planned sequence of instruction consisting of 2 occupational completion points.

This program is comprised of courses which have been assigned course numbers in the SCNS (Statewide Course Numbering System) in accordance with Section 1007.24 (1), F.S. Career and Technical credit shall be awarded to the student on a transcript in accordance with Section 1001.44(3) (b), F.S.

To teach the courses listed below, instructors must hold at least one of the teacher certifications indicated for that course.

The following table illustrates the postsecondary program structure:

OCP	Course Number	Course Title	Teacher Certification	Length
A	HSC0003	Basic Healthcare Worker	REG NURSE 7 G PARAMEDIC @7 7G MED PROF 7 G EMT 7G	90 hours
B	EMS0050	Emergency Medical Responder		100 hours

Florida's Career Readiness Skills for CTE Programs

Employability Skills	
01.0	Apply academic skills to workplace scenarios.
01.01	Use reading skills.
01.02	Use writing skills.
01.03	Use mathematical strategies and procedures.
01.04	Use scientific principles and procedures.
02.0	Design a solution to an industry problem.
02.01	Use critical thinking.
02.02	Use creativity.
02.03	Make sound decisions.
02.04	Solve problems.
02.05	Reason.
02.06	Plan and organize.
03.0	Manage resources within an industry project
03.01	Manage time.
03.02	Manage money or resources.
03.03	Manage materials.
03.04	Manage personnel.
04.0	Oversee the subcomponents, operations and output of a technical or organizational system.
04.01	Manage systems.
04.02	Monitor systems.
04.03	Improve systems.
05.0	Use information for decision making.
05.01	Locate information.
05.02	Organize information.
05.03	Use information.

	05.04 Analyze information.
	05.05 Communicate information.
06.0	Apply relevant technology to workplace scenarios to aid productivity.
	06.01 Use technology.
07.0	Interpret and express interpersonal communication.
	07.01 Communicate verbally.
	07.02 Listen actively.
	07.03 Comprehend written material.
	07.04 Convey information in writing.
	07.05 Communicate nonverbally.
	07.06 Interpret nonverbal communication.
08.0	Interact with others to accomplish workplace goals.
	08.01 Collaborate with others in a team.
	08.02 Respond to customer needs.
	08.03 Exercise leadership.
	08.04 Negotiate to resolve conflict.
	08.05 Respect others.
09.0	Manage personal behavior to maximize productivity and professional growth.
	09.01 Demonstrate responsibility and self-discipline.
	09.02 Adapt and show flexibility.
	09.03 Work independently.
	09.04 Demonstrate a willingness to learn.
	09.05 Demonstrate integrity.
	09.06 Demonstrate professionalism.
	09.07 Take initiative.
	09.08 Display positive attitude.
	09.09 Take responsibility for professional growth.

Job Attainment	
10.0	Find, assess and apply to job opportunities.
10.01	Identify online job posts relevant to his or her career aspirations.
10.02	Compare and contrast the job posts' required qualifications, job duties, compensation, benefits and employers.
10.03	Define what information, documentation and writing prompts are required for the positions.
11.0	Communicate personal competence, character and fit for a job opportunity.
11.01	Develop a resume.
11.02	Write a cover letter.
11.03	Curate a professional portfolio that includes work products.
11.04	Prepare for and experience a mock job interview.
12.0	Cultivate and leverage relationships to professionally advance.
12.01	Request a signed reference letter, letter of recommendation and/or an online skill/professionalism endorsement.
12.02	Develop a plan to cultivate a professional digital footprint.
12.03	Develop a networking plan for a specific industry of interest.

Standards

After successfully completing this program, the student will be able to perform the following:

01.0 Demonstrate knowledge of the healthcare delivery system and health occupations.
02.0 Demonstrate the ability to communicate and use interpersonal skills effectively.
03.0 Demonstrate legal and ethical responsibilities.
04.0 Demonstrate an understanding of and apply wellness and disease concepts.
05.0 Recognize and practice safety and security procedures.
06.0 Recognize and respond to emergency situations.
07.0 Recognize and practice infection control procedures.
08.0 Demonstrate an understanding of information technology applications in healthcare.
09.0 Demonstrate employability skills.
10.0 Demonstrate knowledge of blood borne diseases, including HIV/AIDS.
11.0 Apply basic math and science skills.
12.0 Demonstrate an understanding of the roles and responsibilities of the Emergency Medical Responder.
13.0 Demonstrate an understanding of EMS Operations
14.0 Demonstrate an ability to communicate effectively as part of the EMS team.
15.0 Demonstrate an understanding of medicolegal aspects
16.0 Determine and record vital signs of a sick or injured person.
17.0 Use medical identification devices.
18.0 Conduct a primary assessment of problems that are a threat to life if not corrected immediately.
19.0 Demonstrate BLS procedures.
20.0 Recognize and control bleeding.
21.0 Recognize and control shock.
22.0 Understand the importance of emergency medications.
23.0 Demonstrate understanding of airway management, respiration and artificial ventilation.
24.0 Provide secondary assessment.
25.0 Identify musculo-skeletal injuries.
26.0 Demonstrate proper spinal motion restriction of a Cervical/Spinal injury.
27.0 Demonstrate proper extremity immobilization as well as other immobilization for other injuries (pelvis, ribs).
28.0 Provide emergency evacuation and transfer of a sick and/or injured person.
29.0 Identify and provide initial care for a sick and/or injured patient.
30.0 Identify and care for patients who are in special situations.
31.0 Provide triage to victims of multiple casualty incidents.
32.0 Scene Assessment.
33.0 Recognize entrapment situations.
34.0 Assist with emergency childbirth.
35.0 Identify critical incident stressors.

Florida Department of Education
Student Performance Standards

Program Title: **Emergency Medical Responder**
Career Certificate Program Number: **H171500**

The **Basic Health Care Worker (HSC0003)** is referred to as the **Health Science Core** and is the first OCP in the majority of the Career Certificate Program health science programs. Secondary and Postsecondary students completing the health science core will not have to repeat the core in any other health science program in which it is a part. When the recommended sequence is followed, the structure allows students to complete at specified points for employment or remain for advanced training or cross-training.

Course Number: HSC0003
Occupational Completion Point: A
Basic Healthcare Worker – 90 Hours

To ensure consistency whenever these courses are offered, the health science core standards (1-11) and benchmarks have been placed in a separate document. To access this document, visit this link:
https://www.fldoe.org/file/20894/health-sci-core-psav-cc-2627.rtf

Course Number: EMS0050
Occupational Completion Point: B
Emergency Medical Responder – 100 Hours

12.0	Demonstrate an understanding of the roles and responsibilities of the Emergency Medical Responder. The student will be able to:
12.01	Describe the role of Emergency Medical Responder as a member of the EMS team in the community and public health.
12.02	List and describe the responsibilities of the Emergency Medical Responder for the provision of pre-hospital emergency care within the local EMS system.
12.03	Describe principles of safely operating a ground ambulance.
12.04	Quality improvement vs. quality assurance, evidence-based practice and patient outcomes, data collection.
12.05	Role of Medical oversight.
12.06	Understand the guidelines of operating safety in and around a landing zone during air medical operations and transport.
12.07	Implement appropriate patient safety goals. Culture of safety in work practice and in assessment, treatment and transport of patients.
12.08	Standards safety precautions and personal protective equipment.
13.0	Demonstrate an understanding of EMS Operations.

13.01 Identify the risks and responsibilities of emergency response and radio communications.
13.02 Identify the risks and responsibilities of operating emergency vehicles.
13.03 Understand the criteria for utilizing air medical response.
13.04 Identify the risks, needs, and advantages of utilizing air medical response.
14.0 Demonstrate an ability to communicate effectively as part of the EMS team. The student will be able to:
14.01 Demonstrate the proper procedure for the transfer of patient care to other EMS personnel.
14.02 Describe information regarding a patient's condition and treatment that need to be communicated.
14.03 Communicate the Emergency Medical Responder's observations and actions to whomever patient care is transferred.
14.04 Describe and apply the principles of communicating with patients in a manner that achieves a positive relationship.
14.04 Recognize simple medical prefixes, suffixes, combining vowels, and words.
15.0 Demonstrate an understanding of medicolegal aspects. The student will be able to:
15.01 Describe and demonstrate an understanding of the medicolegal aspects of an Emergency Medical Responder's provision of emergency medical care in the jurisdiction having authority (medical direction), including, but not limited to, end-of-life issues, duty to act, standard of care, consent to care, forcible restraint, abandonment, documentation, and any applicable Good Samaritan Laws
15.02 Practice within medicolegal standards, including Florida Department of Health legislation (64J, 401) and National EMS standards.
16.0 Determine and record vital signs of a sick or injured person. The student will be able to:
16.01 Determine and record skin color, temperature, and moistness.
16.02 Demonstrate ability to accurately measure and record vital signs including manual blood pressure in both a normal patient and a hemodialysis patient.
17.0 Use medical identification devices. The student will be able to:
17.01 Identify the most commonly used digital medical identification devices.
17.02 Apply the information contained on or in the medical identification devices to patient assessment and patient care procedures, including advanced directives.
18.0 Conduct a primary assessment of problems that are a threat to life if not corrected immediately. The student will be able to:
18.01 Determine number of patients and call for additional resources.
18.02 Determine and record the level of consciousness of the injured person including person, place, time, and events.

	18.03 Assess for an adequate or inadequate airway, respiration, ventilation, and circulation and profuse bleeding.
	18.04 Recognize when immediate correction is necessary.
	18.05 Perform a rapid full body scan.
	18.06 Assess patient and determine if the patient has a life-threatening condition.
	18.07 Use spinal precautions as appropriate
	18.08 Determine the patient's chief complaint.
	18.09 Determine the mechanism of injury or nature of illness.
	18.10 Use appropriate interviewing techniques to determine the patient's associated signs and symptoms.
19.0	Demonstrate BLS procedures. The student will be able to:
	19.01 Establish and maintain an open airway using both manual and mechanical airway techniques.
	19.02 Restore breathing and circulation by means of cardiopulmonary resuscitation (CPR).
	19.03 Demonstrate proficiency in the use of an automated external defibrillator (AED).
20.0	Recognize and control bleeding. The student will be able to:
	20.01 Demonstrate knowledge of anatomy and physiology of the circulatory system (Including the heart, arteries, veins, and perfusion).
	20.02 Identify items that can be used to control external bleeding and minimize the contamination of open wounds.
	20.03 Apply pressure dressings, tourniquets, and wound packing that will control bleeding/hemorrhage and minimize the contamination of open wounds.
	20.04 Identify the likelihood of internal bleeding through observations of signs, symptoms and mechanisms of injury.
	20.05 Differentiate between blunt and penetrating mechanisms of injury and their associated complications.
	20.06 Care for a patient who exhibits the signs and symptoms of internal bleeding.
	20.07 Apply current trauma treatment standards when applying a tourniquet, which may include Pre-Hospital Trauma Life Support (PHTLS) standards.
21.0	Recognize and control shock. The student will be able to:
	21.01 Recognize the likelihood that shock may occur or be present based on patient assessment and observation of a mechanism of injury.

	21.02 Understand the pathophysiology of shock.
	21.03 Provide anti-shock measures as a part of routine patient care.
22.0	Understand the importance of emergency medications. The student will be able to:
	22.01 Demonstrate the proper safety procedures when handling and administering medications.
	22.02 Understand the advantages, disadvantages, and techniques of self and peer administration of an intramuscular injection by auto injector.
	22.03 Describe the names, effects, indications, contraindications, side effects, routes of administration, and dosages for specific medications (i.e., chemical antidote auto injector devices).
	22.04 Demonstrate how to observe and respond to patient's need for narcotic antagonists.
	22.05 Demonstrate accurate dosage calculation, including weight-based dosing procedures.
	22.06 Demonstrate the six rights of medication administration.
	22.07 Demonstrate how to administer narcotic antagonists, using a unit-dose, premeasured intranasal device.
	22.08 Document administration of narcotic antagonists and patient's response on medical record.
	22.09 Observe and communicate effects of medications to the patient’s assigned EMT/Paramedic.
23.0	Demonstrate understanding of airway management, respiration, and artificial ventilation. The student will be able to:
	23.01 Apply knowledge of anatomy and physiology, including upper and lower airway to airway management procedures (i.e., ventilation, oxygenation, respiration, and perfusion).
	23.02 Understand the pathophysiology of respiratory dysfunction (including but not limited to asthma, bronchiolitis, pneumonia, and chronic, obstructive pulmonary disease).
	23.03 Understand the effect of ventilation on cardiac output.
	23.04 Use available mechanical devices to assure the maintenance of an open airway and assist ventilation according to American Heart Association (AHA) standards.
	23.05 Demonstrate proficiency in supplemental oxygen therapy including portable oxygen cylinder and oxygen delivery devices.
	23.06 Describe and demonstrate airway management utilizing of upper airway suctioning.
24.0	Provide secondary assessment. The student will be able to:
	24.01 Conduct a methodical head-to-toe physical examination to discover conditions not found during the primary assessment.
	24.02 Assess the patient’s vital signs (Including, but not limited to, heart rate, blood pressure, respiratory rate, and pain level)

	24.03 Interview the sick or injured person to obtain facts relevant to the person's condition.
	24.04 Interview co-workers, witnesses, family members, or other individuals to obtain facts relevant to the person's condition.
	24.05 Apply knowledge of how and when to reassess patients based on patient condition.
25.0	Identify musculo-skeletal injuries. The student will be able to:
	25.01 Apply knowledge of anatomy and physiology of the muscles and bones.
	25.02 Identify the various types of musculo-skeletal injuries.
	25.03 Immobilize and otherwise care for suspected fractures, dislocations, sprains and strains with available supplies and equipment, including commercially available and improvised devices.
	25.04 Demonstrate an understanding of the function and need for traction splints.
26.0	Demonstrate proper spinal motion restriction of a cervical/spinal injury. The student will be able to:
	26.01 Identify need for spinal motion restriction.
	26.02 Maintain in-line spinal motion restriction of cervical spine.
	26.03 Place proper fitting rigid extrication-type cervical collar.
	26.04 Place patient in supine position on appropriate spine board based on patient condition.
	26.05 Secure patient to spinal motion restriction device.
27.0	Demonstrate proper extremity immobilization as well as other immobilization for other injuries (pelvis, ribs). The student will be able to:
	27.01 Identify need for extremity immobilization.
	27.02 Assesses motor, sensory, and distal circulation in extremities.
	27.03 Place proper fitting splint on extremity.
	27.04 Reassesses motor, sensory, and distal circulation in extremities.
28.0	Provide emergency evacuation and transfer of a sick and/or injured person. The student will be able to:
	28.01 Describe situations when a person should be evacuated or transferred.
	28.02 Use the most appropriate assist, drag or carry (alone or with a partner) to move a sick or injured person from a dangerous location to a safe place.

	28.03 Maintain safety precautions during evacuation and transfer.
	28.04 Demonstrate an understanding of the purpose and use of transfer methods for patients including stair chairs and stretchers.
	28.05 Understand and demonstrate proper body mechanics when lifting and moving patients.
29.0	Identify and provide initial care for a sick and/or injured patient. The student will be able to:
	29.01 Identify and care for patients with non-traumatic chest pain, utilizing patient assessment.
	29.02 Identify and care for patients experiencing respiratory distress/failure/arrest, utilizing patient assessment.
	29.03 Identify and care for patients experiencing a diabetic emergency, utilizing patient assessment.
	23.04 Identify and care for a patient who is experiencing a seizure, utilizing patient assessment.
	29.04 Identify and care for a patient who has ingested, inhaled, absorbed or been injected with a poisonous substance.
	29.06 Identify and care for a patient who is in an altered state of consciousness, utilizing patient assessment.
	29.07 Identify and care for a patient who is experiencing a stroke, utilizing patient assessment.
	29.08 Identify and care for a patient who has a foreign body in the eye, utilizing patient assessment.
	29.09 Identify and care for a patient who has shock associated with gastrointestinal bleeding.
	29.10 Identify and care for a patient who has epistaxis.
	29.11 Identify and care for a patient experiencing an anaphylactic reaction.
	29.12 Identify and care for a patient with non-traumatic fracture.
	29.13 Identify and care for a patient experiencing a behavioral emergency and demonstrate knowledge of suicide risk.
	29.14 Identify and care for a patient with thermal, chemical, or electrical burns, determining the severity including degree, body surface area, type, and location.
	29.15 Identify and care for a patient suffering from an environmental emergency including heat cramps, heat exhaustion, heat stroke, and frostbite, utilizing patient assessment.
30.0	Identify and care for patients who are in special situations. The student will be able to:
	30.01 Identify patients who have special needs (including but not limited to abuse, domestic violence, and sex trafficking).
	30.02 Care for injured/ill children.

	30.03 Care for the injured/ill elderly.
	30.04 Care for the injured/ill physically disabled.
	30.05 Care for the injured/ill developmentally disabled.
31.0	Provide triage to victims of multiple casualty incidents. The student will be able to:
	31.01 Categorize the victims of multiple casualty incidents according to the severity of injury or illness based on patient assessments.
	31.02 Use triage tags or other identification devices available locally to indicate priorities for pre-hospital emergency care and transportation to medical facilities.
	31.03 Work as a member of a team to perform triage at locations of multiple casualty incidents.
	31.04 Work as a member of a team to perform patient assessments at locations of multiple casualty incidents.
	31.05 Work as a member of a team to carry out patient care procedures at the locations of multiple casualty incidents.
	31.06 Demonstrate knowledge of the operating procedures during a terrorist event or during a natural or man-made disaster.
	31.07 Demonstrate a basic understanding of the Incident Command System (ICS) implemented by the Federal Emergency Management Agency (FEMA),
	31.08 Discuss and demonstrate Hazardous Waste Operations and Emergency Response (HAZWOPER) standard, 29 CFR 1910.120 – First Responder Awareness Level https://www.osha.gov/emergency-preparedness/hazardous-waste-operations/standards
32.0	Scene Assessment. The student will be able to:
	32.01 Take steps to minimize the chance of injury or death to all involved when confronted with a potentially life-threatening situation based on Presence of hazards.
33.0	Recognize entrapment situations. The student will be able to:
	33.01 Identify accident-related hazards and undertake hazard control measures consistent with the capabilities of the Emergency Medical Responder and available equipment.
	33.02 Recognize available equipment that is used to safely gain access to persons who are entrapped.
	33.03 Recognize available equipment that is used to safely disentangle persons from mechanisms of entrapment.
	33.04 Identify which agencies to notify for assistance with entrapment situations.
34.0	Assist with emergency childbirth. The student will be able to:
	34.01 Evaluate a mother to determine whether delivery is imminent.

	34.02 Assist with a normal delivery.
	34.03 Care for the mother and baby.
	34.04 Identify abnormal childbirth situations and care for the mother and baby within the Emergency Medical Responder's capabilities.
35.0	Identify critical incident stressors. The student will be able to:
	35.01 Identify stressors which may affect the performance of an Emergency Medical Responder.
	35.02 Identify stressors which may affect the behavior of a sick or injured person.
	35.03 Carry out procedures to minimize critical incident stress.
	35.04 Identify signs and symptoms of PTSD and the resources available for treatment.

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as, experimental, quality, and safety procedures are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate and troubleshoot equipment/tools used to make observations. Students understand measurement error; and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

Special Notes

In order for students to take the NREMT003 Emergency Medical Responder exam the program must be approved by the National Registry for Emergency Medical Technicians. To receive approval from NREMT each program must be “authorized” by the Bureau of Emergency Medical Services by completing the instructor qualifications form required by Bureau of EMS.

The Emergency Medical Responder instructor shall issue to each student documentation of successful course completion which shall include date of issuance, student's name, name of sponsoring agency (DOE), name of training agency, and instructor's printed name and signature, plus the wording "issued pursuant to section 401.435, F.S." The instructor must also maintain on file following course completion, a roster listing the names of students who successfully completed the course, the dates and location of the course, and the name of the instructor.

The student performance standards for Emergency Medical Responder were adapted and condensed from U. S. Department of Transportation Emergency Medical Services; Emergency Medical Responder Training Course, National Standard Curriculum Instructors Lesson Plan and American Society for Testing and Materials, Committee F-30. Administrators and instructors should refer to these materials for additional details.

This program meets the Department of Health’s education requirements for HIV/AIDS, Domestic Violence and Prevention of Medical Errors. Although not a requirement for initial licensure, it is a requirement for renewal, therefore the instructor **may** provide a certificate for renewal purposes to the student verifying these requirements have been met.

If students in this program are seeking a licensure, certificate or registration through the Department of Health, please refer to 456.0635, F.S. for more information on disqualification for a license, certificate, or registration through the Department of Health.

The Core should be taken first in the program. Following the successful completion of the core, the student is eligible to take the National Health Care Foundation Skill Standards Assessment with instructor approval and the completion of a portfolio.

Career and Technical Student Organization (CTSO)

CTSOs are co-curricular career and technical student organizations providing leadership training and reinforcing specific career and technical skills. Career and Technical Student Organizations provide activities for students as an integral part of the instruction offered. Other CTSOs not listed in

this curriculum framework or recognized by the Florida Department of Education are permissible provided they support student mastery over the standards and benchmarks of this curriculum framework.

Cooperative Training – OJT

On-the-job training is appropriate but not required for this program. Whenever offered, the rules, guidelines, and requirements specified in the OJT framework apply.

Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

Note: postsecondary curriculum and regulated secondary programs cannot be modified.

Florida Department of Education
Curriculum Framework

Program Title: **Mental Health Technician**
Program Type: **Career Preparatory**
Career Cluster: **Health Science**

Career Certificate Program		
Program Number	H180100	
CIP Number	0351150204	
Grade Level	30, 31	
Program Length	480 hours	
Teacher Certification	Refer to the **Program Structure** section.	
CTSO	HOSA	
SOC Codes (all applicable)	For program SOC codes, please see the Program and Course Tables section of the CTE Program Resources page linked below.	
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml	
Basic Skills Level	Computation (Mathematics): 9	Communications (Reading and Language Arts): 9

Purpose

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Health Science career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of Health Science career cluster.

The purpose of this program is to prepare students for employment as mental health technicians, psychiatric aides or psychiatric technicians, mental health technicians and nursing assistants. Additional certification and licensure opportunities (i.e., Certified Recovery Peer Specialist, Certified Community Health Worker and Certified Behavioral Health Technician) are noted at the end of the document under Special Notes.

The content includes but is not limited to nursing assistant skills, physical assessment, patient teaching and education, wellness and disease concepts, HIV/AIDS, growth and development, mental illness, anxiety, bipolar disorder, depression, schizophrenia, psychosis, personality disorders, emergency and crisis intervention, Alzheimer's Disease and dementia, intellectual developmental disabilities, substance abuse, group therapy, stress management, employability skills, safety and security issues, legal and ethical, therapeutic communication, documentation, clinical skills including hygiene, vital signs and CPR.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Program Structure

This program is a planned sequence of instruction consisting of 3 occupational completion points.

This program is comprised of courses which have been assigned course numbers in the SCNS (Statewide Course Numbering System) in accordance with Section 1007.24 (1), F.S. Career and Technical credit shall be awarded to the student on a transcript in accordance with Section 1001.44(3) (b), F.S.

This program is a planned sequence of instruction consisting of 3 occupational completion points.

To teach the courses listed below, instructors must hold at least one of the teacher certifications indicated for that course.

The following table illustrates the postsecondary program structure:

OCP	Course Number	Course Title	Teacher Certification	Length
A	HSC0003	Basic Healthcare Worker	REG NURSE 7 G LPN 7 G* PRAC NURSE @7 %7%G (Must be a Registered Nurse)	90 hours
B	HCP0121	Nurse Aide and Orderly (articulated)		75 hours
C	HCP0810	Mental Health Technician	REG NURSE 7 G	315 hours

***The LPN 7 G district issued certification is a practical nurse. A practical nurse can only be utilized as an instructor of the CNA training program when they are supervised by the program coordinator which must be a registered nurse. Please refer to 64B9-15.005, F.A.C., for requirements.**

Florida's Career Readiness Skills for CTE Programs

Employability Skills	
01.0	Apply academic skills to workplace scenarios.
	01.01 Use reading skills.
	01.02 Use writing skills.
	01.03 Use mathematical strategies and procedures.
	01.04 Use scientific principles and procedures.
02.0	Design a solution to an industry problem.
	02.01 Use critical thinking.
	02.02 Use creativity.
	02.03 Make sound decisions.
	02.04 Solve problems.
	02.05 Reason.
	02.06 Plan and organize.
03.0	Manage resources within an industry project
	03.01 Manage time.
	03.02 Manage money or resources.
	03.03 Manage materials.
	03.04 Manage personnel.
04.0	Oversee the subcomponents, operations and output of a technical or organizational system.
	04.01 Manage systems.
	04.02 Monitor systems.
	04.03 Improve systems.
05.0	Use information for decision making.
	05.01 Locate information.
	05.02 Organize information.
	05.03 Use information.

	05.04 Analyze information.
	05.05 Communicate information.
06.0	Apply relevant technology to workplace scenarios to aid productivity.
	06.01 Use technology.
07.0	Interpret and express interpersonal communication.
	07.01 Communicate verbally.
	07.02 Listen actively.
	07.03 Comprehend written material.
	07.04 Convey information in writing.
	07.05 Communicate nonverbally.
	07.06 Interpret nonverbal communication.
08.0	Interact with others to accomplish workplace goals.
	08.01 Collaborate with others in a team.
	08.02 Respond to customer needs.
	08.03 Exercise leadership.
	08.04 Negotiate to resolve conflict.
	08.05 Respect others.
09.0	Manage personal behavior to maximize productivity and professional growth.
	09.01 Demonstrate responsibility and self-discipline.
	09.02 Adapt and show flexibility.
	09.03 Work independently.
	09.04 Demonstrate a willingness to learn.
	09.05 Demonstrate integrity.
	09.06 Demonstrate professionalism.
	09.07 Take initiative.
	09.08 Display positive attitude.
	09.09 Take responsibility for professional growth.

Job Attainment	
10.0	Find, assess and apply to job opportunities.
10.01	Identify online job posts relevant to his or her career aspirations.
10.02	Compare and contrast the job posts' required qualifications, job duties, compensation, benefits and employers.
10.03	Define what information, documentation and writing prompts are required for the positions.
11.0	Communicate personal competence, character and fit for a job opportunity.
11.01	Develop a resume.
11.02	Write a cover letter.
11.03	Curate a professional portfolio that includes work products.
11.04	Prepare for and experience a mock job interview.
12.0	Cultivate and leverage relationships to professionally advance.
12.01	Request a signed reference letter, letter of recommendation and/or an online skill/professionalism endorsement.
12.02	Develop a plan to cultivate a professional digital footprint.
12.03	Develop a networking plan for a specific industry of interest.

Standards

After successfully completing this program, the student will be able to perform the following:

01.0 Demonstrate knowledge of the healthcare delivery system and health occupations.
02.0 Demonstrate the ability to communicate and use interpersonal skills effectively.
03.0 Demonstrate legal and ethical responsibilities.
04.0 Demonstrate an understanding of and apply wellness and disease concepts.
05.0 Recognize and practice safety and security procedures.
06.0 Recognize and respond to emergency situations.
07.0 Recognize and practice infection control procedures.
08.0 Demonstrate an understanding of information technology applications in healthcare.
09.0 Demonstrate employability skills.
10.0 Demonstrate knowledge of blood borne diseases, including HIV/AIDS.
11.0 Apply basic math and science skills.
12.0 Use verbal and written communications specific to Nurse Assisting.
13.0 Demonstrate legal and ethical responsibilities specific to Nurse Assisting.
14.0 Perform physical comfort and safety functions specific to Nurse Assisting.
15.0 Provide personal patient care.
16.0 Perform patient care procedures.
17.0 Apply principles of nutrition.
18.0 Provide care for geriatric patients.
19.0 Apply the principles of infection control specific to Nursing Assisting.
20.0 Provide biological, psychological, and social support.
21.0 Perform supervised organizational functions, following the patient care plan.
22.0 Assist with restorative (rehabilitative) activities.
23.0 Demonstrate and implement knowledge of mental health, mental illness, including substance use/abuse and addiction.
24.0 Identify the spectrum of interventions and treatment for mental health problems and the types of delivery of care in the stabilization and rehabilitation of the mental health patient.
25.0 Demonstrate an understanding of various mental health disorders, observable signs and symptoms and general interventions to be implemented by the mental health technician.
26.0 Provide therapeutic communication, knowledge of therapeutic relationship, and support for the mental health patient.
27.0 Perform skills and documentation related to caring for and supervising the mental health patient in various types of treatment settings.
28.0 Implement crisis intervention techniques and emergency services if necessary in the mental health setting.
29.0 Participate as a member of a multidisciplinary team in the planning and implementation of care and treatment for individual patients.
30.0 Provide patient education and information on the various resources and support groups available for the mentally ill, substance using or addictive client and family members.
31.0 Conduct individual, group and family presentations/discussions to facilitate patient recovery and wellness.
32.0 Perform pharmacological aspects of care as directed (residential and assisted living facility settings).

Florida Department of Education
Student Performance Standards

Program Title: **Mental Health Technician**
Career Certificate Program Number: **H180100**

The **Basic Health Care Worker (HSC0003)** is referred to as the **Health Science Core** and is the first OCP in the majority of the Career Certificate Program health science programs. Secondary and Postsecondary students completing the health science core will not have to repeat the core in any other health science program in which it is a part. When the recommended sequence is followed, the structure allows students to complete at specified points for employment or remain for advanced training or cross-training.

Course Number: HSC0003
Occupational Completion Point: A
Basic Healthcare Worker – 90 Hours

To ensure consistency whenever these courses are offered, the health science core standards (1-11) and benchmarks have been placed in a separate document. To access this document, visit this link:
https://www.fldoe.org/file/20894/health-sci-core-psav-cc-2627.rtf

Course Number: HCP0121
Occupational Completion Point: B
Nurse Aide and Orderly (Articulated)

12.0	Use verbal and written communications specific to nurse assisting. The student will be able to:
12.01	Obtain specified data from patient and family.
12.02	Utilize verbal and written information to assist with the patient's plan of care.
12.03	Demonstrate use of the communication system.
13.0	Demonstrate legal and ethical responsibilities specific to Nurse Assisting. The student will be able to:
13.01	Discuss and demonstrate legal and ethical behavior within the nursing assistant scope of practice including role limitations in Florida.
13.02	Describe the purpose of the chain of communication to resolve conflict.
13.03	Follow policies and procedures affecting the health, safety, and well-being of patients.
13.04	Demonstrate safe standards of patient care including prevention and quality of care
13.05	Exhibit behavior supporting and promoting patients’ and/or residents' rights.

	13.06 Recognize potential for and prevention of medical errors.
	13.07 Practice the proper procedures to follow regarding medical errors.
	13.08 Follow policies and procedures affecting the health, safety, and well-being of patients.
	13.09 Recognize and report signs of substance abuse.
	13.10 Demonstrate the understanding of vulnerable population abuse and reporting procedures per agency.
	13.11 Define Omnibus Budget Reconciliation Act (OBRA).
	13.12 Define Minimum Data Set (MDS).
14.0	Perform physical comfort and safety functions specific to Nurse Assisting. The student will be able to:
	14.01 Implement appropriate regulatory and accrediting agency patient safety guidelines.
	14.02 Maintain safe patient units, equipment, and a comfortable environment.
	14.03 Maintain service areas on the units including supplies and equipment.
	14.04 Observe, report, and record changes in the patient's behavior as needed, including mental awareness.
	14.05 Demonstrate adjustment of bed and side-rails according to facility policy.
	14.06 Demonstrate and assist patient to dangle.
	14.07 Demonstrate lifting, supporting and transferring patients from bed to chair, bed to bed, and bed to stretcher, including the use of the various assistive devices and equipment while utilizing proper body mechanics and patient safety measures
	14.08 Demonstrate the proper use of a gait/transfer belt in both transfer and ambulation.
	14.09 Assist patient in ambulation, including the use of crutch, cane, or walker.
	14.10 Demonstrate the proper wheelchair safety techniques and assist patient as needed with use.
	14.11 Apply supportive devices as directed (e.g., footboard, over-bed cradle, alternating pressure mattress).
	14.12 Assist patient with care and use of prosthetic/orthotic devices.
	14.13 Describe emergency procedures utilized in the clinical area(s) and the role of the nursing assistant in these procedures.
15.0	Provide personal patient care. The student will be able to:
	15.01 Perform bed bath; observe and report changes in a patient including skin and level of consciousness.

15.02	Assist with shower or tub bath, including the use of specialty tubs or prepackaged disposable-bagged bath.
15.03	Administer back rub with bath and as needed.
15.04	Assist patient with hair care utilizing sink, tub, shower, bed or shower cap.
15.05	Demonstrate the use of a safety and/or electric razor to shave the patient.
15.06	Demonstrate how to groom patient, including hair, skin, foot, hand and nail care.
15.07	Assist with and/or administer oral hygiene including denture care.
15.08	Assist patient to dress.
15.09	Assist patient with toileting using various types of restorative and rehabilitative equipment.
15.10	Assist patient with use of bedpan (standard and fracture)
15.11	Assist with bowel and bladder training.
15.12	Assist and/ or provide perineal care.
15.13	Empty, measure and record urinary output and/or drainage.
15.14	Demonstrate application and use of a leg bag, leg strap and dignity bag.
15.15	Monitor and assist with the drainage of urostomy bags and colostomy bags.
15.16	Assist patient with both donning and doffing prosthesis and brace.
15.17	Assist patient with meals.
15.18	Describe the relationships of body systems when providing patient care.
15.19	Recognize abnormal signs and symptoms of common diseases and conditions when providing patient care.
16.0	Perform patient care procedures. The student will be able to:
16.01	Demonstrate ability to accurately measure, record and report vital signs.
16.02	Assist with the admission of a patient and/or resident.
16.03	Assist with the admission, transfer, and discharge of a patient and/or resident.
16.04	Maintain patient-belongings list.

16.05	Make unoccupied/occupied bed.
16.06	Provide passive range-of-motion exercises.
16.07	Apply anti-embolic hose and sequential compression devices.
16.08	Understand and demonstrate proper collection of routine, timed urine and clean catch urine specimens.
16.09	Record fluid intake and output (I&O).
16.10	Observe, record, and report patient's emesis.
16.11	Monitor and provide urinary catheter care and drainage systems.
16.12	Assist with ostomy care including emptying or changing ostomy bags that do not adhere to the skin.
16.13	Collect stool specimen.
16.14	Assist with the collection of a sputum specimen.
16.15	Assist the nurse with care of the patient with complex medical needs.
16.16	Assist patient to apply binders.
16.17	Care for patient in skin and skeletal traction.
16.18	Assist with pre-operative and post-operative patient care.
16.19	Reinforce dressings under the supervision of the RN/LPN.
16.20	Obtain and record an apical pulse.
16.21	Provide cast care and/or pin care.
16.22	Provide care for eyeglasses, artificial eyes, and contact lens.
17.0	Apply principles of nutrition. The student will be able to:
17.01	Identify nutrients and food groups.
17.02	Develop a basic food plan.
17.03	Describe special diets.
17.04	Check patient's diet tray for accuracy.

	17.05 Monitor and document Nutritional Intake.
	17.06 Identify and implement regional, cultural and religious food guidelines/preferences.
	17.07 Demonstrate knowledge of the need for thickened liquids and fluid consistency.
	17.08 Identify methods of maintaining fluid balance including encouraging and restricting fluids.
18.0	Provide care for geriatric patients. The student will be able to:
	18.01 Identify and assist with methods and procedures to prevent pressure ulcers.
	18.02 Identify and assist with methods to prevent falls in the elderly.
	18.03 Identify and assist with safety principles as related to the elderly.
	18.04 Describe general characteristics, particular needs, and age related changes of the elderly.
	18.05 Identify attitudes and living habits that promote positive mental and physical health for the elderly.
	18.06 Distinguish between fact and fallacy about the aging process.
	18.07 Apply reality orientation techniques and validation therapy unless it is contraindicated by the patient diagnosis.
	18.08 Recognize and respond appropriately to symptoms of common diseases, including dementia, depression/suicide and Alzheimers.
	18.09 Provide and involve patients in diversional activities.
	18.10 Identify common alterations in elderly patient behavior.
	18.11 Provide care for patients with special needs (e.g., impaired hearing, impaired vision, immobility, impaired body functions, cognitively impaired (dementia)).
	18.12 Demonstrate awareness of common behaviors in drug use and abuse in the elderly.
	18.13 Report concerns to the nurse and appropriate authorities related to drug use and abuse in the elderly patient.
	18.14 Identify the need for community resources and services available to the elderly and their caregiver.
	18.15 Identify components of the grief process.
	18.16 Demonstrate an understanding of end of life care, hospice and palliative care.
19.0	Apply the principles of infection control specific to nursing assisting. The student will be able to:
	19.01 Discuss transmission-based precautions.

	19.02 Identify the chain of infection.
	19.03 Provide care for patients with infectious diseases applying the principles of "Standard Precautions" utilized with all patients as well as special procedures required.
	19.04 Apply the proper use of personal protective equipment (PPE) for all types of isolation including donning and removing PPE appropriately.
	19.05 Follow isolation procedure with food tray, PPE, and other supplies/equipment.
	19.06 Collect specimen from patient in isolation.
20.0	Provide biological, psychological, and social support. The student will be able to:
	20.01 Discuss family roles and their significance to health.
	20.02 Respond to patient and family emotional needs.
21.0	Perform supervised organizational functions, following the patient care plan. The student will be able to:
	21.01 Organize and prioritize patient-care assignments.
	21.02 Complete assignments accurately and in a timely manner.
22.0	Assist with restorative (rehabilitative) activities. The student will be able to:
	22.01 List the purposes of restorative (rehabilitation) program.
	22.02 Assist patient with specified restorative (rehabilitation) needs.
	22.03 Assist patients/residents to reach the optimum level of independence.

Course Number: HCP0810 **Occupational Completion Point: C** **Mental Health Technician – 315 Hours**	
23.0	Demonstrate and implement knowledge of mental health, mental illness, including substance use/abuse and addiction. The student will be able to:
	23.01 Define and discuss mental health.
	23.02 Define and discuss mental illness and contributing factors.
	23.03 Display understanding of The American Psychiatric Association, Diagnostic and Statistical Manual of Mental Disorders (DSM-5).
	23.04 Display awareness of the current trends and issues in the field of mental health i.e., Healthy People 2020 Mental Health Objectives, Office of Disease Prevention and Health Promotion (ODPHP) www.healthypeople.gov .

	23.05 Define and discuss substance use/abuse; addiction; co-occurring disorders and comorbidity.
	23.06 Demonstrate knowledge of the 10 classes of drugs with Substance-Related and Addictive Disorders including prevalence, risks, consequences, intoxication, and withdrawal. • Alcohol • Caffeine • Cannabis • Hallucinogens • Inhalants • Opioids • Sedatives, Hypnotics and Anxiolytics • Stimulants • Tobacco • Other - synthetic drugs and bath salts
	23.07 Implement knowledge of Maslow's hierarchy of needs, physical responses to stress, psychological responses to stress, ego defense mechanisms, stages of grief, and stages of growth and development while caring for the mental health patient.
	23.08 Implement knowledge of cultural and spiritual considerations while caring for the mental health patient.
24.0	Identify the spectrum of interventions and treatment for mental health problems and the types of delivery of care in the stabilization and rehabilitation of the mental health patient. The student will be able to:
	24.01 Display knowledge of prevention programs (i.e., health wellness, stress management, drug education programs, campaigns, parenting programs etc.).
	24.02 Display knowledge of early intervention programs.
	24.03 Display knowledge of different types of treatment and support including the following: • inpatient hospitalization: crisis intervention, detoxification, stabilization and case management • partial hospitalization programs • long term care facilities • community mental health centers and developmental disability centers • clinics • residential facilities • mobile outreach units
	24.04 Describe and identify the multidisciplinary treatment team members and their roles in the stabilization and rehabilitation of the mental health patient.
	24.05 Display knowledge of the chain of command at various treatment settings.
	24.06 Describe the difference between an involuntary and voluntary admission.

	24.07 Display knowledge of Individual therapy, group therapy, cognitive behavioral therapy, family therapy, education groups, support groups, and self- help groups.
	24.08 Display knowledge of the process of recovery and relapse prevention.
	24.09 Demonstrate knowledge of the various types of complementary and integrative therapies.
	24.10 Demonstrate knowledge of pharmacology treatment, side effects and be able to identify patient reactions.
	24.11 Demonstrate knowledge of electroconvulsive therapy (ECT).
25.0	Demonstrate an understanding of various mental health disorders, observable signs and symptoms and general interventions to be implemented by the mental health technician. The student will be able to:
	25.01 Discuss observable signs and symptoms and demonstrate general interventions to be implemented by the mental health technician for the following: • Anxiety • Obsessive Compulsive Disorder (OCD) • Trauma and Stressor Related Disorders • Substance Use and Addictive Disorders • Schizophrenia and Psychosis • Depression and Suicide • Bipolar • Personality Disorders • Eating Disorders • Neurodevelopment Disorders (i.e., autism spectrum disorder) and Neurocognitive Disorders (i.e., dementia)
26.0	Provide therapeutic communication, knowledge of therapeutic relationship, and support for the mental health patient. The student will be able to:
	26.01 Ensure quality patient care by developing good rapport and understanding of patient's needs.
	26.02 Display empathy, respect and nonjudgmental attitude to foster trust.
	26.03 Identify self-awareness issues that can enhance or hinder the mental health technician's role in establishing rapport with the mental health patient.
	26.04 Display knowledge and understanding of effective communication by discussing the communication process: (sender, message, and receiver).
	26.05 Convey simple, clear and direct communication when speaking with the mental health or developmentally disabled patient.
	26.06 Display good listening skills (show interest and concern, establish eye contact, eliminate distractions etc.) when patient is speaking.
	26.07 Apply knowledge of multicultural considerations while communicating.

	26.08 Demonstrate awareness of the mental health patient's nonverbal cues and behaviors.
	26.09 Display knowledge of therapeutic communication techniques and nontherapeutic communication blocks.
	26.10 Differentiate between direct and open-ended questioning.
	26.11 Demonstrate communication techniques, which enable an effective exchange of information, ideas and feelings.
	26.12 Reinforce and acknowledge patient of strengths, resources and that others care.
	26.13 Provide positive feedback for acceptable behaviors.
	26.14 Obtain meaningful information that may require an appropriate nursing intervention.
	26.15 Demonstrate professional relationship and communication with appropriate boundaries.
27.0	Perform skills and documentation related to caring for and supervising the mental health patient in various types of treatment settings. The student will be able to:
	27.01 Demonstrate HIPAA, confidentiality, legal, and ethical considerations while caring for the mental health patient.
	27.02 Provide safety and security measures for inpatient hospitalization including: • room search • frequent monitoring • suicide and homicide precautions • contraband check • elopement precautions • crisis intervention • documentation of the above
	27.03 Provide safety and security measures for outpatient and residential facilities and display knowledge of outpatient emergency procedures.
	27.04 Apply knowledge of infection control and blood borne pathogens on the mental health unit and while caring for the mental health patient.
	27.05 Assist, supervise, and document the mental health patient's: vital signs, ADL's (activities of daily living: hygiene, bathing, dressing, nutrition and elimination); group attendance, and interactions with staff, patients, and visitors.
	27.06 Execute purposeful and productive interactions with patients and staff members.
	27.07 Maintains and adheres to schedule on unit.
	27.08 Maintain a professional atmosphere for a safe and therapeutic environment including respect for boundaries, use of touch, distance zones, set consistent limits especially with manipulative behavior, reports violations and exploitive behaviors immediately.

	27.09	Demonstrate an understanding of subjective and objective observations.
	27.10	Demonstrate observation and documentation skills of patient's verbal and nonverbal communication, changes in thought processes, mood, and behavior.
	27.11	Demonstrate the ability to observe and document physical signs and symptoms of patient responses to medications, drug use or change in condition and change in vital signs.
	27.12	Record events accurately and be able to place event in time and sequence
	27.13	Perform a verbal report and communicate to nurse or team leader completely, accurately and immediately re: changes in patient condition, vital signs, mood and behavior.
	27.14	Demonstrate correct documentation procedures and guidelines in regards to format, proper grammar and spelling, appropriate use of medical abbreviations, medical terminology, and types of charting utilized at different facilities.
28.0	Implement crisis intervention techniques and emergency services if necessary in the mental health setting. The student will be able to:	
	28.01	Discuss the Five-Phase Aggression Cycle: triggering phase, escalation phase, crisis phase, recovery phase, and post crisis phase.
	28.02	Demonstrate vigilance in identifying behaviors that will initiate in increase in agitation and notify team members if observed.
	28.03	Assess suicide or homicide potential plan.
	28.04	Access emergency services if necessary.
	28.05	Utilize reality- oriented approach, active listening and attend to immediate needs.
	28.06	Remain with individual who is experiencing panic anxiety.
	28.07	Demonstrate knowledge of de-escalation techniques: calm voice, reduce stimulation, verbal redirect, time out (quiet time-open seclusion) relaxation techniques, distract with positive activity, discuss alternative strategies etc.
	28.08	Enforce policies and procedures related to aggressive and destructive behaviors including establishing an understanding of acceptable behaviors with the patient and enforcing rules for unacceptable behaviors.
	28.09	Demonstrate knowledge of facility's crisis intervention policy and crisis team to be notified if de-escalation techniques fail, and patient escalates to physical aggression.
	28.10	Discuss crisis intervention measures for Inpatient setting including: • "show of force" • locked seclusion • seclusion and restraints • use of prn medications
	28.11	Demonstrate knowledge of restraint policy.
	28.12	Assist with reintegration of patient to environment when stabilized and is able to participate.

	28.13 Demonstrate vigilance in identifying clues of a patient's suicidal intent – both direct and indirect and notify team member in charge.
	28.14 Demonstrate knowledge of risk factors for suicide and discuss suicide assessment.
	28.15 Recognize self-harm behaviors.
	28.16 Discuss methods of suicide.
	28.17 Discuss suicide ideation.
	28.18 Demonstrate knowledge of notifying nurse/person in charge or emergency services if patient communicates suicide plan or describes means to carry out suicide plan.
	28.19 Follow facility procedure for suicidal patient and access emergency services if necessary.
	28.20 Supervise the safety of a suicidal inpatient by removing all potentially harmful objects and monitoring them closely during mealtime, medication administration, bathroom use, and activities.
	28.21 Demonstrate knowledge of suicide precautions.
	28.22 Demonstrate different levels of suicidal precautions as needed including 1:1 contact and constant visual observation, or every 15-minute checks and document.
	28.23 Demonstrate knowledge of no harm contract and limitations.
	28.24 Encourage client to express honest feelings, including anger.
	28.25 Display and communicate that patient has value.
	28.26 Perform room searches as necessary.
29.0	Participate as a member of a multidisciplinary team in the planning and implementation of care and treatment for individual patients. The student will be able to:
	29.01 Relate unit problems and needs to the team leader, or head nurse as appropriate.
	29.02 Report violations of patients on unit and assist with issuing consequences.
	29.03 Contribute to the formulation of unit goals for individual patient.
	29.04 Participate in the planning, decision-making through staff meetings.
	29.05 Support hospital and residential policies and procedures as well as the procedure manual for the unit.
	29.06 Display understanding of the limitations of the role of the mental health technician.
	29.07 Display cooperation when asked to change assignments or tasks.

	29.08	Demonstrate ability to function independently without constant supervision.
	29.09	Show respect for coworkers and be able to interpret the organizational chart.
	29.10	Maintain own proper physical, emotional, and mental health through application of proper body mechanics, use of healthy coping mechanisms, ability to have self- awareness skills and seek healthy support when necessary.
	29.11	Promote a healthy interpersonal relationship with peers - show respect and recognition by positive communication.
	29.12	Collaborate with other team members in proper application of the nursing process: (assessment, planning, implementation and evaluation).
	29.13	Accept direction and constructive criticism without becoming defensive.
	29.14	Demonstrate ability to assist and function in various unit capacity: clerical and resident manager roles (i.e., display telephone etiquette, escort patient, order supplies, simple filing & fax, copy machine ability).
30.0	Provide patient education and information on the various resources and support groups available for the mentally ill, substance using or addictive client, and family members. The student will be able to:	
	30.01	Demonstrate and discuss knowledge of local support groups, community mental health centers and developmental disabled centers that provide support and assistance to patients and their families.
	30.02	Demonstrate and discuss knowledge of 12- step program model for recovery.
	30.03	Display knowledge of the various self- help groups and peer assistance programs that can help addicts with recovery and rehabilitation i.e., AA (Alcoholics Anonymous), NA (Narcotics Anonymous), MARA (Medication Assisted Recovery Anonymous), and OA (Overeaters Anonymous).
	30.04	Demonstrate and discuss knowledge of 12 step self- help groups available for the family members and loved ones of drug addicts and alcoholics i.e., Al-Anon family groups and Nar-Anon family groups.
	30.05	Understand the principles of 12-step program, 12 steps and traditions, anonymity, key slogans, and use of sponsor.
	30.06	Demonstrate and discuss knowledge regarding national and local organizations and services for mental health and substance use issues such as NAMI, SAMHSA, NIMH, Autism Speaks.org, WRAP (Wellness Recovery Action Plan) for patient and family information.
31.0	Conduct individual, group and family presentations / discussions to facilitate patient recovery and wellness. The student will be able to:	
	31.01	Demonstrate thorough knowledge and preparation of content and information for subject matter of educational group discussion/presentation as well as be able to state the goal of the presentation/discussion.
	31.02	Display awareness of demographics of group participants (gender, culture, age, socioeconomic etc.); awareness of participant's cognitive and developmental stages, readiness for education on subject and comprehension ability.
	31.03	Demonstrate awareness of group dynamics and group process.
	31.04	Communicate "ground rules" and expectations of the group.

31.05	Display ability to create and enforce ground rules and appropriate boundaries for group learning and education.
31.06	Demonstrate effective communication techniques (verbal and nonverbal) and use of possible role play, skits, handouts and creative supplements of content to be discussed or presented. (Assure client safety and know possible “triggers”).
31.07	Display ability to effectively “close” the group or presentation.
31.08	Demonstrate knowledge of: attendance record, points allocated for attendance and participation.
31.09	Communicate to counselor or nurse any behaviors or verbalizations of patient that warrant further exploration or immediate attention.
31.10	Demonstrate ability to document patient attendance and observations in accordance to facility procedures and guidelines.
31.11	Complete a post group self- analysis of one’s own strengths and weaknesses.
31.12	Assess modifications one would make for future group presentations.
32.0	Perform pharmacological aspects of care as directed (residential and assisted living facility settings). The student will be able to:
32.01	Demonstrate knowledge of 6 Rights of Medication Administration (right medication, right dose, right patient, right time, right route, and right documentation) and policies.
32.02	Observe and report side effects of medication.
32.03	Supervise and document patient medication administration.
32.04	Encourage client to take prescribed medication. Document refusal.
32.05	Assemble information about properties of medications being administered, their potential side effects.
32.06	Demonstrate knowledge of the client’s rights relating to taking or refusing medication.
32.07	Determine client's medication history from records or family in relation to re-allergic reactions.
32.08	Assure adequate supply and safeguard storage of medications to prevent overdose.
32.09	Assume responsibility for information transfer to/from oncoming shift and communicate concerns or changes to nurse or person in charge.

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as, experimental, quality, and safety procedures are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate and troubleshoot equipment/tools used to make observations. Students understand measurement error; and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

Special Notes

The Core should be taken first in the program. Following the successful completion of the core, the student is eligible to take the National Health Care Foundation Skill Standards Assessment with instructor approval and the completion of a portfolio.

The program focuses on broad, transferable skills and stresses understanding and demonstration of the following elements of the health care industry; planning, management, finance, technical and production skills, underlying principles of technology, labor issues, community issues and health, safety, and environmental issues.

This program meets the Department of Health's education requirements for HIV/AIDS, Domestic Violence and Prevention of Medical Errors. Although not a requirement for initial licensure, it is a requirement for renewal, therefore the instructor **may** provide a certificate for renewal purposes to the student verifying these requirements have been met.

If students who are successful completers of the Mental Health Technician program can seek further certification through The Florida Certification Board (FCB) for Certified Recovery Peer Specialist: (CRPS-A Adult, CRPS-F Family, CRPS-V Veteran); or Certified Community Health Worker or Certified Behavioral Health Technician, please refer to the FCB for requirements, policies, and procedures at www.flcertificationboard.org. Applicants and certified professionals are individually responsible for ensuring they are following current FCB policy and procedures.

If students in this program are seeking a licensure as a Certified Nursing Assistant (CNA), through The Department of Health, please refer to 456.0635, F.S. for more information on disqualification for the licensure through the Department of Health.

Career and Technical Student Organization (CTSO)

CTSOs are co-curricular career and technical student organizations providing leadership training and reinforcing specific career and technical skills. Career and Technical Student Organizations provide activities for students as an integral part of the instruction offered. Other CTSOs not listed in this curriculum framework or recognized by the Florida Department of Education are permissible provided they support student mastery over the standards and benchmarks of this curriculum framework.

Cooperative Training – OJT

On-the-job training is appropriate but not required for this program. Whenever offered, the rules, guidelines, and requirements specified in the OJT framework apply.

Basic Skills

In Career Certificate programs offered for 450 hours or more, in accordance with Rule 6A-10.040, F.A.C., the minimum basic skills grade levels required for postsecondary adult career and technical students to complete this program are: Computation (Mathematics) and Communications (Reading and Language Arts). These grade level numbers correspond to a grade equivalent score obtained on a state designated basic skills examination.

Adult students with disabilities, as defined in Section 1004.02, Florida Statutes, may be exempted from meeting the Basic Skills requirements (Rule 6A-10.040). Students served in exceptional student education (except gifted) as defined in s. 1003.01, F.S., may also be exempted from meeting the Basic Skills requirement. Each school district and Florida College System Institution must adopt a policy addressing procedures for exempting eligible students with disabilities from the Basic Skills requirement as permitted in Section 1004.91, F.S.

Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

Note: postsecondary curriculum and secondary programs cannot be modified.

Florida Department of Education
Curriculum Framework

This program is a replacement for Dental Laboratory Technology H170108 (0351060306).

Program Title: **Dental Laboratory Technology**
Program Type: **Career Preparatory**
Career Cluster: **Health Science**

Career Certificate Program		
Program Number	H700100	
CIP Number	0351060307	
Grade Level	30, 31	
Program Length	2040 Hours	
Teacher Certification	Refer to the **Program Structure** section.	
CTSO	HOSA	
SOC Codes (all applicable)	For program SOC codes, please see the Program and Course Tables section of the CTE Program Resources page linked below.	
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml	
Basic Skills Level	Computation (Mathematics): 9	Communications (Reading and Language Arts): 9

Purpose

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Health Science career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of Health Science career cluster.

The program is designed to prepare students for entry level employment as dental laboratory technicians, denture technicians, crown & bridge technicians, ceramic & technicians, or to provide supplemental training for persons previously or currently employed in this occupation.

The content of the program includes, but is not limited to, general studies, physical sciences, dental sciences, and dental laboratory techniques.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Program Structure

This program is a planned sequence of instruction consisting of 7 occupational completion points.

This program is comprised of courses which have been assigned course numbers in the SCNS (Statewide Course Numbering System) in accordance with Section 1007.24 (1), F.S. Career and Technical credit shall be awarded to the student on a transcript in accordance with Section 1001.44(3) (b), F.S.

To teach the courses listed below, instructors must hold at least one of the teacher certifications indicated for that course.

The following table illustrates the postsecondary program structure:

OCP	Course Number	Course Title	Teacher Certification	Length
A	DTE0401	Orientation to Dental Laboratory Technology	DEN LABTEC 7G	109 hours
	DTE0433	Denture Technician 1		315 hours
B	DTE0434	Denture Technician 2		315 hours
C	DTE0436	Advanced Denture Technician		255 hours
D	DTE0442	Crown and Bridge Technician		296 hours
E	DTE0461	Ceramic Technician		285 hours
F	DTE0451	Implant, Attachment & Hybrid Restoration Technician		285 hours
G	DTE0481	Dental Laboratory Practicum		180 hours

Florida's Career Readiness Skills for CTE Programs

Employability Skills	
01.0	Apply academic skills to workplace scenarios.
01.01	Use reading skills.
01.02	Use writing skills.
01.03	Use mathematical strategies and procedures.
01.04	Use scientific principles and procedures.
02.0	Design a solution to an industry problem.
02.01	Use critical thinking.
02.02	Use creativity.
02.03	Make sound decisions.
02.04	Solve problems.
02.05	Reason.
02.06	Plan and organize.
03.0	Manage resources within an industry project
03.01	Manage time.
03.02	Manage money or resources.
03.03	Manage materials.
03.04	Manage personnel.
04.0	Oversee the subcomponents, operations and output of a technical or organizational system.
04.01	Manage systems.
04.02	Monitor systems.
04.03	Improve systems.
05.0	Use information for decision making.
05.01	Locate information.
05.02	Organize information.
05.03	Use information.

	05.04 Analyze information.
	05.05 Communicate information.
06.0	Apply relevant technology to workplace scenarios to aid productivity.
	06.01 Use technology.
07.0	Interpret and express interpersonal communication.
	07.01 Communicate verbally.
	07.02 Listen actively.
	07.03 Comprehend written material.
	07.04 Convey information in writing.
	07.05 Communicate nonverbally.
	07.06 Interpret nonverbal communication.
08.0	Interact with others to accomplish workplace goals.
	08.01 Collaborate with others in a team.
	08.02 Respond to customer needs.
	08.03 Exercise leadership.
	08.04 Negotiate to resolve conflict.
	08.05 Respect others.
09.0	Manage personal behavior to maximize productivity and professional growth.
	09.01 Demonstrate responsibility and self-discipline.
	09.02 Adapt and show flexibility.
	09.03 Work independently.
	09.04 Demonstrate a willingness to learn.
	09.05 Demonstrate integrity.
	09.06 Demonstrate professionalism.
	09.07 Take initiative.
	09.08 Display positive attitude.
	09.09 Take responsibility for professional growth.

Job Attainment	
10.0	Find, assess and apply to job opportunities.
10.01	Identify online job posts relevant to his or her career aspirations.
10.02	Compare and contrast the job posts' required qualifications, job duties, compensation, benefits and employers.
10.03	Define what information, documentation and writing prompts are required for the positions.
11.0	Communicate personal competence, character and fit for a job opportunity.
11.01	Develop a resume.
11.02	Write a cover letter.
11.03	Curate a professional portfolio that includes work products.
11.04	Prepare for and experience a mock job interview.
12.0	Cultivate and leverage relationships to professionally advance.
12.01	Request a signed reference letter, letter of recommendation and/or an online skill/professionalism endorsement.
12.02	Develop a plan to cultivate a professional digital footprint.
12.03	Develop a networking plan for a specific industry of interest.

Standards

After successfully completing this program, the student will be able to perform the following:

01.0 Identify the anatomic structure and function of body systems in relation to prosthetic services performed by the dental laboratory technician.
02.0 Practice quality assurance, safety, and infection control.
03.0 Adhere to legal and ethical principles related to the practice of dental laboratory technology.
04.0 Demonstrate knowledge of dental sciences.
05.0 Demonstrate knowledge of physical and mechanical properties of metals and alloys.
06.0 Manufacture various methods of complete denture construction.
07.0 Manufacture complete denture construction on practical work received from a dental clinic.
08.0 Manufacture and identify components of a removable partial denture.
09.0 Manufacture orthodontic and pedodontic appliances.
10.0 Demonstrate knowledge and skills required to manufacture single and multi-unit restorations
11.0 Perform basic occlusion, determinants of occlusal morphology, and physiology of mandibular movements.
12.0 Manufacture restorations in the student's specialty for patients who receive treatment at the dental research clinic.
13.0 Demonstrate knowledge of effective business management techniques.
14.0 Demonstrate knowledge of basic concepts of porcelain-fused-to-metal (PFM) techniques.
15.0 Demonstrate proper design and fabrication for individual and three-unit anterior bridges for pressable system restorations.
16.0 Demonstrate proper design and fabrication for all Ceramics Restorations using the Refractory System.
17.0 Demonstrated knowledge of the Standard Components for Implant Systems.
18.0 Demonstrate proper design and fabrication for the Implants System.
19.0 Describe the Standard Components and fabrication of semi-precision attachments.
20.0 Demonstrate proper design and fabrication of Hybrid Restoration.
21.0 Specialization Removable Appliances: Demonstrate skills in removable dentures on specific projects.
22.0 Perform select proficiency in fixed restorative techniques in chosen areas of specialization.

Florida Department of Education
Student Performance Standards

Program Title: **Dental Laboratory Technology**
Career Certificate Program Number: **H700100**

Course Number: DTE0401 **Occupational Completion Point: A** **Orientation to Dental Laboratory Technology – 109 Hours**	
01.0	Identify the anatomic structure and function of body systems in relation to prosthetic services performed by the dental laboratory technician. The student will be able to:
01.01	Identify structures and functions of head and neck anatomy.
01.02	Identify embryonic development of the head, oral cavity, and individual teeth.
01.03	Identify each tooth and its landmarks.
02.0	Practice quality assurance, safety, and infection control. The student will be able to:
02.01	Practice safety in accordance with institutional policy.
02.02	Identify documentation procedures necessary to comply with state laws.
02.03	Demonstrate knowledge of the dental laboratory technician's role in providing quality assurance in laboratory procedures, reporting, and use and maintenance of equipment.
02.04	Use appropriate dental terminology and abbreviations.
02.05	Demonstrate knowledge, principles, and methods of disease transmission and prevention as related to dental prostheses.
02.06	Demonstrate knowledge of infection control in dental laboratories in accordance with the Centers for Disease Control (CDC)/OSHA guidelines.
02.07	Establish an infection control procedures policy for the dental laboratory.
03.0	Adhere to legal and ethical principles related to the practice of dental laboratory technology. The student will be able to:
03.01	Demonstrate knowledge of the importance of observing the doctor/technician relationship.
03.02	Demonstrate knowledge of state law governing the practice of Dental Laboratory Technology.

Course Number: DTE0433 Occupational Completion Point: B Denture Technician 1 – 315 hours	
04.0	Demonstrate knowledge of dental sciences. The student will be able to:
04.01	Demonstrate knowledge of physical properties, use, and manipulation of dental materials.
04.02	Demonstrate knowledge of the dynamics of occlusion.
04.03	Demonstrate problem-solving skills as related to dental materials.
05.0	Demonstrate knowledge of physical and mechanical properties of metals and alloys. The student will be able to:
05.01	Identify how dental materials are affected by changes in the physical and mechanical properties of the materials.
05.02	List characteristics of a metal.
05.03	Identify the mechanical properties of cast alloys and cold-worked metal, strain hardening, recrystallization, and grain growth.
05.04	Identify the metals and percentages in all types of dental casting gold alloys, and how different alloys of dental gold casting affect the dental restorations.
05.05	Identify heat treatment techniques for dental casting gold alloys.
05.06	List the types, composition, and uses of dental solders.
05.07	Identify the composition and uses of dental fluxes and pickling agents.
05.08	Identify composition, physical and mechanical properties, and heat treatment techniques for base metal alloys, chrome cobalt, and nickel chrome.
05.09	Identify types of burs used in dentistry and the mechanics of cutting.
05.10	Identify abrasion and polishing dentifrices used in the dental lab and how each affects the dental restoration.
Course Number: DTE0434 Occupational Completion Point: B Denture Technician 2 – 315 hours	
06.0	Manufacture various methods of complete denture construction. The student will be able to:
06.01	Make casts by pouring all types of impression material to include dentulous and edentulous impressions.
06.02	Construct base plates by either the light cure or thermoforming vacuum press.

	06.03 Construct wax occlusion rims to exact specifications.
	06.04 Articulate cast upon which complete dentures are to be made on 1 plain line and semi-adjustable articulators.
	06.05 Set up and wax-up complete upper and lower dentures.
	06.06 Manufacture temporary all-acrylic removable partial dentures.
	06.07 Repair all types of dentures.
	06.08 Manufacture immediate complete dentures complete with surgical tray.
	06.09 Relining complete dentures (upper and lower).
	06.10 Perform selective milling and grinding in the finishing of complete dentures.
07.0	Manufacture complete denture construction on practical work received from a dental clinic. The student will be able to:
	07.01 Make stone or plaster casts by pouring all types of impressions, both dentulous and semi-edentulous impressions, be it alginate, rubber base, or silicone.
	07.02 Construct a light-cure or thermoformed vacuum base plate and stabilized tray if so ordered on the prescription by the doctor.
	07.03 Construct wax occlusal rim to exact measurements.
	07.04 Be able to articulate casts on a plain line or semi-adjustable articulator.
	07.05 Set-up and wax-up cases.
	07.06 Invest, pack, cure, deflask, finish, and polish.
	07.07 Repair dentures, flange, adding teeth, or clasp if needed to the denture.
	07.08 Reline any upper or lower denture.
Course Number: DTE0436 Occupational Completion Point: C Advanced Denture Technician – 255 hours	
08.0	Manufacture and identify components of a removable partial denture. The student will be able to:
	08.01 Survey and design the maxillary and mandibular removable partial denture framework.
	08.02 Block out and duplicate the master cast.

	08.03 Identify, explain, and use a variety of clasps.
	08.04 Wax-up, sprue, invest, burnout, and cast non-precious alloy frames.
	08.05 Finish and polish metal frames and arrange artificial teeth.
	08.06 Demonstrate the bending of wrought wire and perform various repairs.
09.0	Manufacture orthodontic and pedodontic appliances. The student will be able to:
	09.01 Identify and describe various types of malocclusion as presented in the course.
	09.02 Identify and know the treatment objectives of the orthodontic appliances presented in the course.
	09.03 Interpret work authorization for orthodontic appliances.
	09.04 Complete the assigned laboratory exercises in the course to the standard of clinically acceptable quality.
Course Number: DTE0442 **Occupational Completion Point: D** **Crown and Bridge Technician – 296 hours**	
10.0	Demonstrate knowledge and skills required to manufacture single and multi-unit restorations. The student will be able to:
	10.01 Pour impression to make casts with removable dies.
	10.02 Articulate casts on a semi-adjustable articulator and use various types of articulation systems.
	10.03 Prepare dies for waxing.
	10.04 Manufacture wax patterns for inlays, onlays, full crowns, and multi-unit restorations.
	10.05 Demonstrate proper techniques in spruing, investing, and casting.
	10.06 Finish all metal cast restorations.
	10.07 Demonstrate a proper diagnostic wax-up for single and multi-unit restorations.
	10.08 Demonstrate the fabrication of a provisional restoration using thermoforming, vacuum, or putty matrix methods.
	10.09 Construct a single and multi-unit restoration.
	10.10 Finish the provisional restoration in an acceptable manner.

	10.11 Construct a post and core with a final restoration.
11.0	Perform basic occlusion, determinants of occlusal morphology, and physiology of mandibular movements. The student will be able to:
	11.01 Identify fundamental occlusion patterning associated with the basic mandibular positions.
	11.02 Identify Dr. Angle's occlusal classifications.
	11.03 Identify cusp types from the functional point of view.
	11.04 Identify the incisal edges and cusps tips of maxillary teeth to mandibular teeth in centric occlusion.
	11.05 Demonstrate the correlation between maxillary and mandibular cusps.
	11.06 Demonstrate an understanding of mandibular movements.
	11.07 Demonstrate an understanding of functional occlusion.
12.0	Manufacture restorations in the student's specialty for patients who receive treatment at the dental research clinic. The student will be able to:
	12.01 Complete denture set-up, wax-up, and finish.
	12.02 Perform basic complete denture relines.
	12.03 Demonstrate knowledge of denture repairs.
	12.04 Removable partial denture wax-up, casting, and finish.
	12.05 Manufacture a Hawley appliance.
	12.06 Manufacture a space maintainer.
	12.07 Fabricate restorations to include: inlay, onlays, full crowns, bridges, Porcelain Fused to Metal (PFM), and all ceramic restorations.
	12.08 Manufacture prostheses for patients currently under treatment or from actual casts or impressions and occlusal records from previously fabricated prostheses.
Course Number: DTE0461 Occupational Completion Point: E Ceramic Technician – 285 Hours	
13.0	Demonstrate knowledge of basic concepts of porcelain-fused-to-metal (PFM) techniques. The student will be able to:
	13.01 Describe the components of dental porcelain.

	13.02 Describe the early porcelain-fused-to-metal systems.
	13.03 Identify various alloys used in the fabrication of PFM restorations.
	13.04 Identify and explain the uses of opaque, body, incisal, modifier, glaze, and stain porcelains.
	13.05 Demonstrate proper metal design for individual and multiple-unit PFM restorations.
	13.06 Demonstrate proper spruing, investing, burnout, casting, and metal finishing techniques.
	13.07 Demonstrate proper and accurate pre-soldering skills.
	13.08 Demonstrate proper and accurate post-soldering skills.
	13.09 Describe the concept of degassing and metal porcelain bonding.
	13.10 Demonstrate approved techniques for opaque, body, and incisal porcelain application.
	13.11 Identify various porcelain firing cycles.
	13.12 Demonstrate approved techniques for contouring and glazing porcelain.
	13.13 Describe the basic concepts of staining, the color wheel and hue, chroma, and value.
	13.14 Demonstrate an understanding of porcelain furnace calibration and maintenance.
14.0	Demonstrate proper design and fabrication for individual and three-unit anterior bridges for pressable system restorations. The student will be able to:
	14.01 Demonstrate proper wax-up, spruing, and investing.
	14.02 Demonstrate proper burnout and pressing.
	14.03 Demonstrate proper recovery/divesting of a pressed crown and bridge.
	14.04 Demonstrate proper finishing techniques of a pressed crown and bridge.
15.0	Demonstrate proper design and fabrication for all Ceramics Restorations using the Refractory System. The student will be able to:
	15.01 Pour impression to make casts with removable dies.
	15.02 Fabricate inlays, onlays, and veneers using the Refractory System.

Course Number: DTE0451 **Occupational Completion Point: F** **Implant, Attachment & Hybrid Restoration Technician – 285 Hours**
16.0 Demonstrated knowledge of the Standard Components for Implant Systems. The student will be able to:
16.01 List the standard components of an implant system, including: • Implant/fixture • Healing Abutment Cover Screw/ Screw • Abutment • Temporary Components • Angulated Abutment • Impression Coping • Open tray/closed tray • Abutment replicas • Analogue/Implant Replica
17.0 Demonstrate proper design and fabrication for the Implants System. The student will be able to:
17.01 Demonstrate the fabrication of a Custom Tray for an Implant Case.
17.02 Demonstrate the fabrication of a Surgical Guide Template.
17.03 Demonstrate the pouring of an impression and fabricate a master cast with an abutment replica in place.
17.04 Apply soft tissue silicone material around the abutment replica.
17.05 Screw/Cement-Retained, castable substructure.
17.06 Demonstrate proper substructure design: waxing, spruing, investing, burnout, casting, and metal finishing techniques for Implant Systems.
17.07 Demonstrate proper design and fabrication of a porcelain-fused-to-metal crown over an implant abutment.
17.08 Demonstrate approved techniques for opaque, body, and incisal porcelain application for Implant Systems.
18.0 Describe the Standard Components and fabrication of semi-precision attachments. The student will be able to:
18.01 Explain the uses of attachments and stress breakers.
18.02 Define and explain basic attachment groups and impression needed.
18.03 Define Attachment Selection.
18.04 Demonstrate proper design and fabrication of a Semi-Precision Attachment.

	18.05 Explain the advantages and disadvantages of attachments.
	18.06 Compare Semi-Precision Attachments versus Precision Attachments.
19.0	Demonstrate proper design and fabrication of Hybrid Restoration. The student will be able to:
	19.01 Fabricate a Bar and Clip Retained Overdenture.
	19.02 Fabricate Custom Tray and Master Cast.
	19.03 Fabricate Baseplate and Occlusion Rims.
	19.04 Fabricate Articulation and Trial Denture.
	19.05 Fabricate a Bar.
	19.06 Demonstrate proper design and fabrication of a Denture Over Implants with a Bar.
Course Number: DTE0481 Occupational Completion Point: G Dental Laboratory Practicum – 180 Hours	
20.0	Specialization Removable Appliances: Demonstrate skills in removable dentures on specific projects. The student will be able to:
	20.01 Survey and design a maxillary and mandibular removable partial denture.
	20.02 Identify and explain the use of wax in a wide variety of clasps.
	20.03 Duplicate master casts.
	20.04 Sprue and invest waxed partial denture castings.
	20.05 Finish and polish a removable partial denture casting.
21.0	Perform select proficiency in fixed restorative techniques in chosen areas of specialization. The student will be able to:
	21.01 Manufacture fixed restorations more quickly and with increased skill.
	21.02 Demonstrate a thorough understanding of the procedures involved in the fabrication of fixed restorations.

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools, and equipment, as well as experimental, quality, and safety procedures, are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate, and troubleshoot equipment/tools used to make observations. Students understand measurement error and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

Laboratory activities are integrated with the didactic portion of this program. Students perform representative tasks in the manufacture of custom-made dental devices and become involved in the dental health team through first-hand observation in clinical procedures as they relate to laboratory techniques.

Special Notes

Reinforcement of basic skills in English, mathematics, and science appropriate for the job preparatory programs occurs through vocational classroom instruction and applied laboratory procedures or practice.

The program should meet the requirements of the Commission on Dental Accreditation of the American Dental Association. Students should be prepared to take the recognized graduate examination offered by the National Board for Certification in Dental Laboratory Technology, Inc.

Dental Laboratory Technicians will complete the certificate program and be prepared to take the recognized graduate examination offered by the National Board of Certification for Dental Laboratory Technicians.

The standard length of the program is 2040 clock hours.

Career and Technical Student Organization (CTSO)

CTSOs are co-curricular career and technical student organizations providing leadership training and reinforcing specific career and technical skills. Career and Technical Student Organizations provide activities for students as an integral part of the instruction offered. Other CTSOs not listed in this curriculum framework or recognized by the Florida Department of Education are permissible provided they support student mastery over the standards and benchmarks of this curriculum framework.

Cooperative Training – OJT

On-the-job training is appropriate but not required for this program. Whenever offered, the rules, guidelines, and requirements specified in the OJT framework apply.

Basic Skills

In Career Certificate programs offered for 450 hours or more, in accordance with Rule 6A-10.040, F.A.C., the minimum basic skills grade levels required for postsecondary adult career and technical students to complete this program are: Computation (Mathematics) and Communications (Language and Reading and Language Arts). These grade level numbers correspond to a grade-equivalent score obtained on a state-designated basic skills examination.

Adult students with disabilities, as defined in Section 1004.02, Florida Statutes, may be exempted from meeting the Basic Skills requirements (Rule 6A-10.040). Students served in exceptional student education (except gifted) as defined in s. 1003.01, F.S., may also be exempted from meeting the Basic Skills requirement. Each school district and Florida College System Institution must adopt a policy addressing procedures for exempting eligible students with disabilities from the Basic Skills requirement as permitted in Section 1004.91, F.S.

Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology, and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

Note: postsecondary curriculum and regulated secondary programs cannot be modified.

Florida Department of Education
Curriculum Framework

This program is a replacement for Surgical Technology H170211 (0351090905). The program length has changed from 1330 clock hours to 1440 clock hours.

Program Title: **Surgical Technology**
Program Type: **Career Preparatory**
Career Cluster: **Health Science**

Career Certificate Program		
Program Number	H700200	
CIP Number	0351090909	
Grade Level	30, 31	
Program Length	1440 hours	
Teacher Certification	Refer to the **Program Structure** section.	
CTSO	HOSA	
SOC Codes (all applicable)	For program SOC codes, please see the Program and Course Tables section of the CTE Program Resources page linked below.	
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml	
Basic Skills Level	Computation (Mathematics): 10	Communications (Reading and Language Arts): 11

Purpose

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Health Science career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of Health Science career cluster.

The program is designed to prepare students for employment as surgical technologists. Selected portions of this program may be utilized to provide additional skills to enable nursing graduates to become employable in operating rooms as surgical technologists.

The content includes but is not limited to communication and interpersonal skills, legal and ethical responsibilities, anatomy, physiology, pathophysiology, microbiology, aseptic techniques, patient care procedures, surgical technology procedures, patient safety, use and care of equipment and supplies, CPR, Heartsaver, employability skills, and basic computer literacy.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Program Structure

This program is a planned sequence of instruction consisting of 2 occupational completion points.

Upon completion of OCP: A, Sterile Processing Technician, students will be eligible to sit for the Healthcare Sterile Processing certification exam.

The Practicum, which begins in Surgical Technologist 2, is a requirement for the completion of the Surgical Technology program. It is a supervised, unpaid experience totaling 343 hours, with at least 300 in a healthcare facility and up to 40 in a simulated lab. Students apply administrative and clinical skills under the supervision of licensed professionals. Experiences align with classroom instruction, reinforcing theoretical knowledge through hands-on practice. The Practicum assesses critical thinking, work ethics, and professionalism in a real-world healthcare setting.

This program is comprised of courses which have been assigned course numbers in the SCNS (Statewide Course Numbering System) in accordance with Section 1007.24 (1), F.S. Career and Technical credit shall be awarded to the student on a transcript in accordance with Section 1001.44(3)(b), F.S.

To teach the courses listed below, instructors must hold at least one of the teacher certifications indicated for that course.

The following table illustrates the postsecondary program structure:

OCP	Course Number	Course Title	Teacher Certification	Length
A	STS0016	Sterile Processing Technician	OPR RM TEC @7 7G REG NURSE 7 G OPR REG NURSE 7 G SURG TECH 7 G PRAC NURSE @7 %7%G (Must be a Registered Nurse)	410 hours
B	STS0010	Surgical Technologist 1		343 hours
	STS0011	Surgical Technologist 2		343 hours
	STS0012	Surgical Technologist 3		344 hours

Florida's Career Readiness Skills for CTE Programs

Employability Skills	
01.0	Apply academic skills to workplace scenarios.
01.01	Use reading skills.
01.02	Use writing skills.
01.03	Use mathematical strategies and procedures.
01.04	Use scientific principles and procedures.
02.0	Design a solution to an industry problem.
02.01	Use critical thinking.
02.02	Use creativity.
02.03	Make sound decisions.
02.04	Solve problems.
02.05	Reason.
02.06	Plan and organize.
03.0	Manage resources within an industry project
03.01	Manage time.
03.02	Manage money or resources.
03.03	Manage materials.
03.04	Manage personnel.
04.0	Oversee the subcomponents, operations and output of a technical or organizational system.
04.01	Manage systems.
04.02	Monitor systems.
04.03	Improve systems.
05.0	Use information for decision making.
05.01	Locate information.
05.02	Organize information.
05.03	Use information.

	05.04 Analyze information.
	05.05 Communicate information.
06.0	Apply relevant technology to workplace scenarios to aid productivity.
	06.01 Use technology.
07.0	Interpret and express interpersonal communication.
	07.01 Communicate verbally.
	07.02 Listen actively.
	07.03 Comprehend written material.
	07.04 Convey information in writing.
	07.05 Communicate nonverbally.
	07.06 Interpret nonverbal communication.
08.0	Interact with others to accomplish workplace goals.
	08.01 Collaborate with others in a team.
	08.02 Respond to customer needs.
	08.03 Exercise leadership.
	08.04 Negotiate to resolve conflict.
	08.05 Respect others.
09.0	Manage personal behavior to maximize productivity and professional growth.
	09.01 Demonstrate responsibility and self-discipline.
	09.02 Adapt and show flexibility.
	09.03 Work independently.
	09.04 Demonstrate a willingness to learn.
	09.05 Demonstrate integrity.
	09.06 Demonstrate professionalism.
	09.07 Take initiative.
	09.08 Display positive attitude.
	09.09 Take responsibility for professional growth.

Job Attainment	
10.0	Find, assess and apply to job opportunities.
10.01	Identify online job posts relevant to his or her career aspirations.
10.02	Compare and contrast the job posts' required qualifications, job duties, compensation, benefits and employers.
10.03	Define what information, documentation and writing prompts are required for the positions.
11.0	Communicate personal competence, character and fit for a job opportunity.
11.01	Develop a resume.
11.02	Write a cover letter.
11.03	Curate a professional portfolio that includes work products.
11.04	Prepare for and experience a mock job interview.
12.0	Cultivate and leverage relationships to professionally advance.
12.01	Request a signed reference letter, letter of recommendation and/or an online skill/professionalism endorsement.
12.02	Develop a plan to cultivate a professional digital footprint.
12.03	Develop a networking plan for a specific industry of interest.

Standards

After successfully completing this program, the student will be able to perform the following:

01.0 Demonstrate knowledge of the healthcare delivery system and health occupations.
02.0 Demonstrate an understanding of and apply wellness and disease concepts.
03.0 Recognize and respond to emergency situations.
04.0 Demonstrate sterile processing skills.
05.0 Use communication and interpersonal skills related to surgical technology.
06.0 Demonstrate an understanding of legal and ethical responsibilities specific to surgical technology.
07.0 Demonstrate an understanding of the basic sciences related to surgical technology.
08.0 Demonstrate knowledge of pharmacology and math calculation principles related to the surgical environment.
09.0 Describe and practice safety measures in the surgical environment.
10.0 Assist the RN circulator with patient care procedures related to the surgical environment and describe methods for meeting patients' needs.
11.0 Demonstrate knowledge of the skills necessary to function safely and effectively.
12.0 Demonstrate knowledge of and assist with surgical procedures.
13.0 Demonstrate employability skills.

Florida Department of Education
Student Performance Standards

Program Title: **Surgical Technology**
Career Certificate Program Number: **H700200**

Course Number: STS0016 **Occupational Completion Point: A** **Sterile Processing Technician – 410 Hours**	
01.0	Demonstrate knowledge of the healthcare delivery system and health occupations. The student will be able to:
01.01	Describe the composition and functions of a healthcare team.
01.02	Identify the general roles and responsibilities of the individual members of the healthcare team
02.0	Demonstrate an understanding of and apply wellness and disease concepts. The student will be able to:
02.01	Apply the principles of medical/surgical asepsis, including attire, environmental control, and traffic patterns, to control and manage dirty, clean, and sterile areas of the operating room and sterile processing department
02.02	Demonstrate an understanding of infection and disease transmission control techniques that align with the Centers for Disease Control (CDC) and Occupational Safety and Health Administration (OSHA) guidelines for surgery.
02.03	Apply infection control techniques following the Centers for Disease Control (CDC) guidelines.
03.0	Recognize and respond to emergency situations. The student will be able to:
03.01	Obtain and maintain training or certification on cardiopulmonary resuscitation (CPR), automated external defibrillator (AED), foreign body airway obstruction (FBAO), and first aid.
04.0	Demonstrate sterile processing skills. The student will be able to:
04.01	Inspect and send out for repair instruments, equipment, and supplies regarding condition and quality.
04.02	Describe the methods of disinfection and sterilization.
04.03	Demonstrate the handling, inspection, and notification process regarding package integrity.
04.04	Demonstrate correctly decontamination techniques for instruments, equipment, and the environment used for surgical procedures.
04.05	Describe clean and sterile transportation, restocking, and storage principles for instruments, supplies, and equipment.
04.06	Identify instruments, supplies, and equipment used for surgical procedures.
04.07	Describe the use of sterilization process monitors, including temperature and frequency of appropriate chemical indicators and bacterial spore tests for all sterilizers.

	04.08 Demonstrate the ability to prepare and label items for high-level disinfection and sterilization correctly.
	04.09 Demonstrate the techniques of high-level disinfection and sterilization for immediate use items.
	04.10 Demonstrate case cart preparation and management.
	04.11 Describe how to update procedure/preference cards.
	04.12 Apply electrical knowledge to safe patient care practices in surgery.
	04.13 Demonstrate an understanding of surgical preference cards and their importance.
Course Number: STS0010 Occupational Completion Point: B Surgical Technologist 1 – 343 Hours	
05.0	Use communication and interpersonal skills related to surgical technology. The student will be able to:
	05.01 Describe various forms of communication within the role of a surgical technologist.
	05.02 Analyze and select the appropriate behavioral response to meet the patient's individual needs.
	05.03 Identify the concepts of conflict resolution, assertive behavior, and the principles of teamwork in the surgical environment.
06.0	Demonstrate an understanding of legal and ethical responsibilities specific to surgical technology. The student will be able to:
	06.01 State methods, standards, and aids that assist a surgical technologist with interpreting and following legal responsibilities.
	06.02 Advocate for patients to ensure that they are included in the healthcare decision-making processes.
07.0	Demonstrate an understanding of the basic sciences related to surgical technology. The student will be able to:
	07.01 Relate medical terminology, medical abbreviations, and anatomy and physiology to surgical specialties and specific procedures.
	07.02 Analyze patient defense mechanisms, the chain of infection, and the infectious process as related to surgical practice.
	07.03 Correlate wound classifications and wound healing principles with wound management guidelines.
	07.04 Discuss the principles of information technology, electricity, and robotics as they relate to surgery
08.0	Demonstrate knowledge of pharmacology and math calculation principles related to the surgical environment. The student will be able to:
	08.01 Describe the roles of the anesthesia provider.

	08.02	Analyze the administration of anesthesia, including the methods, agents, and techniques.
	08.03	Describe the preoperative examination and preparation process for both surgery and anesthesia.
	08.04	Describe potential anesthesia and operative complications and interventions for each.
	08.05	Define the pharmacology terminology and describe the basic concepts of pharmacology, including pharmacokinetics and pharmacodynamics.
	08.06	Identify the classifications, actions, effects, and precautions for common drugs used at the sterile field and within the surgical environment.
	08.07	Demonstrate the application of the six rights of medication administration (right patient, right medication, right dosage, right route, right time/frequency, and right documentation)..
	08.08	Analyze and assemble correctly all medication supplies, for each drug to be used on the sterile field.
	08.09	Demonstrate the appropriate methods of transferring and accepting medications onto the sterile field.
	08.10	Prepare, manage, and label sterile solutions and medications accurately within the sterile field.
	08.11	Correctly calculate common medication conversions and dosages.
	08.12	Demonstrate preparation and passing of medication mixtures using ratios and proportions correctly.
	08.13	Maintains an accurate account of the amount of each medication and/or solution used and notifies the circulator as appropriate to the situation to ensure accurate documentation.
09.0	Describe and practice safety measures in the surgical environment. The student will be able to:	
	09.01	Describe the role, job duties, and responsibilities of the surgical technologist in the healthcare setting.
	09.02	Inspect emergency equipment and supplies for condition and quantity.
	09.03	Demonstrate appropriate safety measures to prevent operating room fires and electrical shock from equipment.
	09.04	Describe appropriate safety measures for laser and electrosurgical unit usage in surgery.
	09.05	Describe appropriate regulatory and accreditation agency patient safety guidelines.
	09.06	Describe the role of the surgical technologist in a disaster situation.
	09.07	Describe the role of the surgical technologist in an emergency patient situation.
	09.08	Demonstrate how to prepare the operative site.
	09.09	Demonstrate and describe how to perform steps for Foley catheter insertion and connecting to drainage correctly.

Course Number: STS0011 Occupational Completion Point: B Surgical Technologist 2 – 343 Hours - PRACTICUM	
10.0	Assist the RN circulator with patient care procedures related to the surgical environment and describe methods for meeting patients' needs. The student will be able to:
10.01	Perform patient transfer/transportation techniques used in the operating room.
10.02	Assist with positioning and apply safety devises to the patient for surgery.
10.03	Ground the patient and connect the electrosurgical cautery unit.
10.04	Describe the roles of an anesthetist and circulating nurse during induction.
10.05	Prepare the operative site.
10.06	Perform steps for Foley catheter insertion and connecting to drainage.
10.07	Apply sterile dressing and bandage.
11.0	Demonstrate knowledge of the skills necessary to function safely and effectively. The student will be able to:
11.01	Select and verify instruments, equipment, and supplies, including any implants needed for surgical procedures using surgeon preference/procedure cards, including those identified as “have available/hold items”.
11.02	Measure and pour sterile solutions.
11.03	Perform surgical scrub.
11.04	Put on sterile gown and gloves.
11.05	Drape tables and solution stands.
11.06	Set up sterile mayo stand and instrument table.
11.07	Prepare sutures, ligatures, and ties.
11.08	Prepare, pass, and monitor the amount given for medications used on the sterile field.
11.09	Assist surgeon in gowning and gloving.
11.10	Assist in draping the patient, pass instruments, and monitor the field.
11.11	Identify/correct and/or report breaks in aseptic technique.
11.12	Monitor body fluids, e.g., blood loss, and fluid retention.

11.13	Perform complete counts with R.N.
11.14	Assist in maintaining retraction, cutting suture, and holding instruments as directed by the surgeon in the second assistant role.
11.15	Prepare specimen for laboratory analysis.
11.16	Decontaminate instruments, equipment, and environment.
11.17	Replenish supplies and equipment.
Course Number: STS0012 Occupational Completion Point: B Surgical Technologist 3 – 344 Hour – PRACTICUM (See the above)	
12.0	Demonstrate knowledge of and assist with surgical procedures. The student will be able to:
12.01	Identify preoperative diagnosis, common complications, and operative pathology relating to specific surgical procedures.
12.02	Identify and describe types of incisions and wound closures.
12.03	Perform the usual sequence of a common surgical procedure (i.e., incision into the anatomy, dissection of the anatomy, and closing of the anatomy).
12.04	Demonstrates proper cost-effective methods.
13.0	Demonstrate employability skills. The student will be able to:
13.01	Identify documents that may be required when applying for a job.
13.02	Write an appropriate resume.
13.03	Conduct a job search.
13.04	Complete a job application form correctly.

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools, and equipment, as well as experimental, quality, and safety procedures, are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate, and troubleshoot equipment/tools used to make observations. Students understand measurement error and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

Clinical learning experiences in an operating room and related areas are 0an integral part of this program. It is strongly recommended that a teacher to student ratio of 1:10 be held in the laboratory setting.

Special Notes

This program focuses on broad, transferable skills and stresses understanding and demonstration of the following elements of the health care industry: planning, management, finance, technical and production skills, underlying principles of technology, labor issues, community issues, and health, safety, and environmental issues.

This program meets the Department of Health's education requirements for HIV/AIDS, Domestic Violence, and Prevention of Medical Errors. Although not a requirement for initial licensure, it is a requirement for renewal, therefore, the instructor **may** provide a certificate for renewal purposes to the student verifying these requirements have been met.

If students in this program are seeking a licensure, certificate, or registration through the Department of Health, please refer to 456.0635, F.S. for more information on disqualification for a license, certificate, or registration through the Department of Health.

Although it is not required, it is strongly recommended that the program should meet the requirements of the Commission on Accreditation of Allied Health Education Programs (CAAHEP) or Accrediting Bureau of Health Education Schools (ABHES).

After successful completion of a Commission on Accreditation of Allied Health Education Programs (CAAHEP) or Accrediting Bureau of Health Education Schools (ABHES) accredited program, students are eligible to take the National Board of Surgical Technologist and Surgical Assisting (NBSTSA), Certified Surgical Technologist exam and the National Center of Competency Testing (NCCT) exam.

Please contact NBSTSA for more information on this exam: National Board of Surgical Technologists and Surgical Assisting (NBSTSA) http://nbstsa.org/, 6 West Dry Creek Circle, Suite 100, Littleton, Colorado 80120**,** Toll-free: (800) 707-0057.

Please contact **NCCT** for more information on this exam: National Center of Competency Testing (NCCT) https://www.ncctinc.com/ , 11020 King Street, Suite 400, Overland Park, KS 66210, Toll-free: (800) 875-4404.

Career and Technical Student Organization (CTSO)

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Cooperative Training – OJT

On-the-job training is appropriate but not required for this program. Whenever offered, the rules, guidelines, and requirements specified in the OJT framework apply.

Basic Skills

In Career Certificate programs offered for 450 hours or more, in accordance with Rule 6A-10.040, F.A.C., the minimum basic skills grade levels required for postsecondary adult career and technical students to complete this program are: Computation (Mathematics) and Communications (Reading and Language Arts). These grade level numbers correspond to a grade equivalent score obtained on a state-designated basic skills examination.

Adult students with disabilities, as defined in Section 1004.02, Florida Statutes, may be exempted from meeting the Basic Skills requirements (Rule 6A-10.040). Students served in exceptional student education (except gifted) as defined in s. 1003.01, F.S., may also be exempted from meeting the Basic Skills requirement. Each school district and Florida College System Institution must adopt a policy addressing procedures for exempting eligible students with disabilities from the Basic Skills requirement as permitted in Section 1004.91, F.S.

Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology, and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

Note: postsecondary curriculum and regulated secondary programs cannot be modified.
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Florida Department of Education
Curriculum Framework

This program is a replacement for Medical Assisting, H170515, (0351080102).
The program length has changed from 1300 clock hours to 900 clock hours.

Program Title: **Medical Assisting**
Program Type: **Career Preparatory**
Career Cluster: **Health Science**

Career Certificate Program		
Program Number	H700300	
CIP Number	0351080105	
Grade Level	30,31	
Standard Length	900 hours	
Teacher Certification	Refer to the **Program Structure** section.	
CTSO	HOSA	
Primary SOC Code	For program SOC codes, please see the Program and Course Tables section of the CTE Program Resources page linked below.	
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml	
Basic Skills Level	Computation (Mathematics): 10	Communications (Reading and Language Arts): 10

Purpose

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Health Science career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of the Health Science career cluster. This program is designed to prepare students for employment as medical assistants.

The content includes but is not limited to communication, transcultural communication in healthcare, interpersonal skills, legal and ethical responsibilities, health-illness concepts, administrative and clinical duties, emergency procedures including CPR and first aid, emergency preparedness, safety and security procedures, medical terminology, anatomy and physiology, and employability skills.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Program Structure

This program is a planned sequence of instruction consisting of 6 occupational completion points.

This program is comprised of courses which have been assigned course numbers in the SCNS (Statewide Course Numbering System) in accordance with Section 1007.24 (1), F.S. Career and Technical credit shall be awarded to the student on a transcript in accordance with Section 1001.44(3)(b), F.S.

To teach the course(s) listed below, instructors must hold at least one of the teacher certifications indicated for that course.

The following table illustrates the postsecondary program structure:

OCP	Course Number	Course Title	Teacher Certification	Length
A	MEA0003	Introduction to Medical Assisting and Pharmacology	MED ASST 7G LPN 7G c REG NURSE 7 G	250 hours
	MEA0502	Introduction to Medical Office Procedures		100 hours
B	MEA0521	Phlebotomist		75 hours
C	MEA0574	Laboratory Procedures		80 hours
D	MEA0543	EKG Aide		75 hours
E	MEA0584	Clinical Assisting		130 hours
F	MEA0943	Practicum Experience		190 hours

Florida's Career Readiness Skills for CTE Programs

Employability Skills	
01.0	Apply academic skills to workplace scenarios.
01.01	Use reading skills.
01.02	Use writing skills.
01.03	Use mathematical strategies and procedures.
01.04	Use scientific principles and procedures.
02.0	Design a solution to an industry problem.
02.01	Use critical thinking.
02.02	Use creativity.
02.03	Make sound decisions.
02.04	Solve problems.
02.05	Reason.
02.06	Plan and organize.
03.0	Manage resources within an industry project
03.01	Manage time.
03.02	Manage money or resources.
03.03	Manage materials.
03.04	Manage personnel.
04.0	Oversee the subcomponents, operations and output of a technical or organizational system.
04.01	Manage systems.
04.02	Monitor systems.
04.03	Improve systems.
05.0	Use information for decision making.
05.01	Locate information.
05.02	Organize information.
05.03	Use information.

	05.04 Analyze information.
	05.05 Communicate information.
06.0	Apply relevant technology to workplace scenarios to aid productivity.
	06.01 Use technology.
07.0	Interpret and express interpersonal communication.
	07.01 Communicate verbally.
	07.02 Listen actively.
	07.03 Comprehend written material.
	07.04 Convey information in writing.
	07.05 Communicate nonverbally.
	07.06 Interpret nonverbal communication.
08.0	Interact with others to accomplish workplace goals.
	08.01 Collaborate with others in a team.
	08.02 Respond to customer needs.
	08.03 Exercise leadership.
	08.04 Negotiate to resolve conflict.
	08.05 Respect others.
09.0	Manage personal behavior to maximize productivity and professional growth.
	09.01 Demonstrate responsibility and self-discipline.
	09.02 Adapt and show flexibility.
	09.03 Work independently.
	09.04 Demonstrate a willingness to learn.
	09.05 Demonstrate integrity.
	09.06 Demonstrate professionalism.
	09.07 Take initiative.
	09.08 Display positive attitude.
	09.09 Take responsibility for professional growth.

Job Attainment	
10.0	Find, assess and apply to job opportunities.
10.01	Identify online job posts relevant to his or her career aspirations.
10.02	Compare and contrast the job posts' required qualifications, job duties, compensation, benefits and employers.
10.03	Define what information, documentation and writing prompts are required for the positions.
11.0	Communicate personal competence, character and fit for a job opportunity.
11.01	Develop a resume.
11.02	Write a cover letter.
11.03	Curate a professional portfolio that includes work products.
11.04	Prepare for and experience a mock job interview.
12.0	Cultivate and leverage relationships to professionally advance.
12.01	Request a signed reference letter, letter of recommendation and/or an online skill/professionalism endorsement.
12.02	Develop a plan to cultivate a professional digital footprint.
12.03	Develop a networking plan for a specific industry of interest.

Standards

After successfully completing this program, the student will have demonstrated mastery the following student learning outcomes:

01.0 Demonstrate proper use of medical terminology and identify anatomy and physiology concepts in both illness and wellness states.
02.0 Demonstrate knowledge of pharmaceutical principles and administer medications.
03.0 Demonstrate basic clerical/medical office duties, including communication and interpersonal skills.
04.0 Demonstrate knowledge of legal and ethical responsibilities for medical assistants.
05.0 Perform administrative office duties and employability skills.
06.0 Demonstrate accepted professional, communication, and interpersonal skills as related to phlebotomy.
07.0 Discuss phlebotomy in relation to the health care setting.
08.0 Identify the anatomic structure and function of body systems in relation to services performed by a phlebotomist.
09.0 Recognize and identify collection reagents supplies, equipment, and interfering chemical substances.
10.0 Demonstrate skills and knowledge necessary to perform phlebotomy.
11.0 Practice infection control following standard precautions.
12.0 Practice accepted procedures of transporting, accessioning, and processing specimens.
13.0 Practice quality assurance and safety.
14.0 Describe the cardiovascular system.
15.0 Identify legal and ethical responsibilities of an EKG aide.
16.0 Demonstrate knowledge of, apply, and use medical instrumentation modalities.
17.0 Perform patient care techniques in the health care facility.
18.0 Demonstrate basic office examination procedures.
19.0 Demonstrate knowledge of the fundamentals of microbial control and use aseptic techniques.
20.0 Demonstrate minor treatments.
21.0 Demonstrate knowledge of basic diagnostic medical assisting procedures.
22.0 Perform CLIA-waived diagnostic clinical laboratory procedures.
23.0 Demonstrate knowledge of emergency preparedness and protective practices.
24.0 Perform administrative and general skills.
25.0 Dispose of bio-hazardous waste in appropriate containers.
26.0 Collaborate, communicate, and interact professionally with other health care professionals utilizing technology.

Florida Department of Education
Student Performance Standards

Program Title: Medical Assisting
Career Certificate Program Number: H700300

Course Number: MEA0003 **Occupational Completion Point: A (1 of 2)** **Introduction to Medical Assisting and Pharmacology – 250 Hours**	
01.0	Demonstrate proper use of medical terminology and identify anatomy and physiology concepts in both illness and wellness states. The student will be able to:
01.01	Demonstrate accurate use and identification of medical terminology, including word parts.
01.02	Identify body organization, the 11 major organ systems of the body (1) Integumentary, (2) Skeletal, (3) Muscular, (4) Nervous, (5) Endocrine, (6) Circulatory (cardiovascular) (7) Lymphatic, (8) Respiratory, (9) Digestive, (10) Urinary, and (11) Reproductive Systems and related pathology.
01.03	Compare the structure and function of the body across the lifespan.
01.04	Identify psychological reactions to illness, including defense mechanisms.
02.0	Demonstrate knowledge of pharmaceutical principles and administer medications. The student will be able to
02.01	Identify commonly administered drugs, their uses, and effects, and the five schedules of controlled substances
02.02	Identify the major classifications of medication for each body system, including indications for use, side effects, and adverse reactions.
02.03	Use correct approved pharmaceutical abbreviations and terminology in accordance with the Joint Commission.
02.04	Identify various methods and routes of drug administration.
02.05	Instruct patients regarding self-administration of medications.
02.06	Calculate and confirm dosage and administer pharmaceuticals by applying the Rights of Drug Administration.
02.07	Demonstrate knowledge of emergency medications for first aid.
02.08	Recognize and report medication errors.
02.09	Demonstrate appropriate techniques to: • Prepare and administer non-parenteral medications (solid, liquids, and inhalers). • Prepare and administer parenteral medications. • Reconstitute powdered drugs.

	• Prepare injections from ampules and vials.
02.10	Identify the risks and complications associated with drug administration.
Course Number: MEA0502 Occupational Completion Point: A (2 of 2) Introduction to Medical Office Procedures –100 Hour	
03.0	Demonstrate basic clerical/medical office duties, including communication and interpersonal skills. The student will be able to
03.01	Perform effective communication skills essential to the medical office, including courtesy and respect for patients and other healthcare workers.
03.02	Maintain good interpersonal relationships, including cultural orientation, diverse ages, and cultural, economic, and religious groups.
03.03	Prepare and maintain medical records electronically as it pertains to EMR/EHR
03.04	Schedule routine appointments, patient admissions, and/or procedures within the electronic health record (EMR/EHR).
03.05	Maintain office inventory.
03.06	Receive patients and visitors and inform patients of office policies both verbally and in writing.
03.07	Identify and maintain office policies and office security policies/procedures in accordance with HIPAA.
04.0	Demonstrate knowledge of legal and ethical responsibilities for medical assistants. The student will be able to:
04.01	Describe the role of the medical assistant, including legislated Scope of Practice as set forth in Florida Statutes.
04.02	Recognize the importance of certification of the medical assistant as it relates to entering orders in EMR/EH.
04.03	Explain the difference between the liability of the providers and staff members in the medical office.
04.04	Explain the principles for preventing medical liability to include malpractice, liabilities, negligence, abandonment, false imprisonment, and fraud.
04.05	Discuss legal and ethical issues as they relate to healthcare to include the code of ethics consistent with healthcare.
04.06	Summarize the Patient Care Partnership.
05.0	Perform administrative office duties and employability skills. The student will be able to:
05.01	Execute data management using Electronic Medical Record (EMR), including, but not limited to, patient registration, appointment scheduling, charting, billing and insurance processing, procedure and diagnostic coding, ordering, monitoring patient testing, medication and prescription orders, keyboarding, and correspondence

	05.02 Execute non-EMR data management, including, but not limited to, selecting appropriate procedure and diagnostic codes, and processing insurance claims.
	05.03 Perform various financial procedures, to include billing and collection procedures, payroll procedures, and checkbook procedures
	05.04 Demonstrate knowledge of management in a medical office, including but not limited to personnel records, interviewing, various management styles, risk management, and conflict resolution.
	05.05 Discuss the laws governing harassment, labor, and employment.
	05.06 Perform employability skills.
Course Number: MEA0521 Occupational Completion Point: B Phlebotomist – 75 Hours	
06.0	Demonstrate accepted professional, communication, and interpersonal skills as related to phlebotomy. The student will be able to:
	06.01 Demonstrate the appropriate professional behavior of a phlebotomist and describe the scope of practice (job skills and duties) for a phlebotomist
	06.02 Explain to the patient the procedure to be used in specimen collection.
	06.03 Explain in detail the importance of identifying patients correctly when drawing blood.
	06.04 Explain the importance of continuing education in relation to certification to maintain competency and skills.
07.0	Discuss phlebotomy in relation to the health care setting. The student will be able to
	07.01 List, classify, and discuss various departments and services within the health care setting with which the phlebotomist must interact to obtain laboratory specimens from patients
	07.02 Identify the major departments/sections within the clinical laboratory, the major types of procedures run in each department/section, and their specimen requirements.
	07.03 Describe the roles of the major classifications of clinical laboratory personnel (i.e., pathologist, chief/administrative technologist, CLS, MLS, MLT, MT, phlebotomist, lab assistant, etc.).
08.0	Identify the anatomic structure and function of body systems in relation to services performed by a phlebotomist. The student will be able to:
	08.01 Describe and define major body systems with emphasis on the circulatory system.
	08.02 List and describe the main superficial veins used in performing venipuncture
	08.03 Locate the most appropriate site(s) for both capillary and venipuncture
	08.04 Describe the function of the following blood components: erythrocytes, thrombocytes, leukocytes, and plasma

	08.05 Compare and contrast serum and plasma as they relate to blood collection.
	08.06 Discuss hemostasis, hemolysis, and methods of prevention as they relate to blood collection
09.0	Recognize and identify collection reagents supplies, equipment, and interfering chemical substances. The student will be able to:
	09.01 Identify and discuss the proper use of appropriate types of equipment needed to collect various clinical laboratory blood specimens by venipuncture.
	09.02 Explain the special precautions and types of equipment needed to collect blood from a pediatric patient.
	09.03 Identify and discuss the proper use of supplies used in collecting short-draw specimens or difficult draws.
	09.04 Identify and discuss the proper use of the various types of anticoagulants, preservatives, and gels used in blood collection and the vacuum tube color-codes for these additives.
	09.05 Describe the types of specimens that are analyzed in the clinical laboratory and the phlebotomist's role in collecting and/or transporting these specimens to the laboratory.
	09.06 Describe substances potentially encountered during phlebotomy that can interfere in the analysis of blood constituents.
	09.07 Define and utilize correct medical terminology and metric measurement needed for specimen collection.
10.0	Demonstrate skills and knowledge necessary to perform phlebotomy. The student will be able to:
	10.01 Follow the approved procedure for completing a laboratory requisition form and recognize a properly completed form.
	10.02 Demonstrate knowledge of established protocol for patient and specimen identification.
	10.03 Discuss appropriate methods for facilitating and preparing the patient for capillary and venipuncture collection.
	10.04 List appropriate antiseptic agents useful in preparing sites for capillary and venipuncture for adult and pediatric patients.
	10.05 Perform venipuncture by evacuated tube, butterfly, and syringe systems, demonstrating appropriate use of supplies, proper handling of equipment and specimens, and appropriate patient care
	10.06 Describe the correct order of draw.
	10.07 Describe the use of barcoding systems used for specimen collection
	10.08 Convey an understanding of capillary puncture using appropriate supplies and techniques for both adult and pediatric patients.
	10.09 Describe the most common complications associated with capillary and venipuncture, their causes, prevention, and treatment.
	10.10 Recognize and respond to possible adverse patient reactions such as allergies, convulsions, syncope, lightheadedness, vomiting, and nerve involvement.
	10.11 Perform appropriate procedures for disposing of used or contaminated capillary and venipuncture supplies.

	10.12 Demonstrate the proper procedure for collecting blood cultures
	10.13 Demonstrate a working understanding of how the age and weight of patients impact the maximum amount of blood that can be safely drawn.
11.0	Practice infection control following standard precautions. The student will be able to:
	11.01 Define the term “hospital-acquired infection.
	11.02 Describe and practice procedures for infection prevention, including hand washing skills.
	11.03 Discuss transmission-based precautions.
	11.04 Identify potential routes of infection and their complications.
12.0	Practice accepted procedures of transporting, accessioning, and processing specimens. The student will be able to:
	12.01 Instruct patients in the proper collection of urine (clean catch, id-stream), sputum, and stool specimens.
	12.02 Follow the approved procedure for preparation and processing (e.g., centrifugation, separation, aliquoting, labeling, and storage) of serum, plasma, urine, sputum, stool, and wound culture specimens.
	12.03 Describe the significance of time constraints for specimen collection, transporting, and delivery.
	12.04 Describe routine procedures for transporting and processing specimens, including DOT packaging requirements.
13.0	Practice quality assurance and safety. The student will be able to:
	13.01 Distinguish and perform procedures that ensure the reliability of test results when collecting blood specimens.
	13.02 Practice appropriate patient safety
	13.03 Practice safety in accordance with OSHA (state & federal guidelines) for chemical, biological, and PPE established procedures, including proper disposal of sharps and biohazardous materials.
	13.04 Follow documentation procedures for work-related accidents.
	13.05 Implement appropriate Joint Commission patient safety goals and other accrediting/regulatory agency guidelines
Course Number: MEA0574 Occupational Completion Point: C Laboratory Procedures – 80 Hours	
14.0	Perform CLAI-waived diagnostic clinical laboratory procedures. The student will be able to:
	14.01 Comply with safety signs, symbols, labels, and SDS.

14.02	Describe the criteria used by the Food and Drug Administration (FDA) to classify a test as “CLIA-waived” and the regulatory constraints on test performance.
14.03	Explain the methods of quality control for CLIA-waived testing, identify acceptable and unacceptable control results, and describe specific corrective action required when results are unacceptable.
14.04	Demonstrate proper technique for the collection of specimens for laboratory testing.
14.05	Explain CLIA-waived testing, e.g., occult blood, urinalysis, hematology, chemistry, pregnancy, and infectious disease testing.
15.0	Demonstrate knowledge of emergency preparedness and protective practices. The student will be able to
15.01	Maintain and operate emergency equipment and supplies.
15.02	Prepare a list of community resources for emergency preparedness, including domestic violence resources.
15.03	Recognize and report abuse, including domestic violence, neglect, and suspected human trafficking.
15.04	Explain an evacuation plan for a physician’s office.
15.05	Obtain and maintain training for certification on cardiopulmonary resuscitation (CPR), automated external defibrillator (AED), foreign body airway obstruction (FBAO), and first aid.
Course Number: MEA0543 Occupational Completion Point: D EKG Aide – 75 Hours	
16.0	Describe the cardiovascular system. The student will be able to
16.01	Locate the heart and surrounding structures
16.02	Review the structure and function of the heart.
16.03	Trace the flow of blood through the cardiopulmonary system.
16.04	Identify and describe the electrical conduction system
16.05	Describe signs and symptoms of a patient demonstrating poor perfusion or low cardiac output and state the importance of rapid reporting.
17.0	Identify legal and ethical responsibilities of an EKG aide. The student will be able to
17.01	Recognize and practice legal and ethical responsibilities as they relate to an EKG aide
17.02	Maintain a safe and efficient work environment

	17.03 Maintain EKG equipment per the manufacturer's guidelines so it will be safe and accurate.
18.0	Demonstrate knowledge of, apply, and use medical instrumentation modalities. The student will be able to:
	18.01 Calibrate and maintain EKG equipment in the work environment and verify settings on the EKG machine
	18.02 Identify three types of lead systems (standard/limb, augmented, and precordial/chest).
	18.03 Apply the concepts of Einthoven's triangle and Wilson's Central Terminal to EKG tracing
	18.04 Prepare the patient and demonstrate proper lead placement, including lead placement with special consideration for various patients with special needs.
	18.05 Demonstrate knowledge of the application of a Holter Monitor, ambulatory monitoring, and provide patient education on its use.
	18.06 Identify artifacts and mechanical problems and actions to correct them.
	18.07 Perform a 3, 5, 12 lead EKG and perform a rhythm strip.
	18.08 Recognize normal sinus rhythm.
	18.09 Recognize and report dysrhythmias that are not normal sinus rhythms.
	18.10 Recognize signs and symptoms of cardiac emergencies on the EKG tracing and understand the importance of rapid reporting.
	18.11 Use documentation skills to identify an electrocardiograph
19.0	Perform patient care techniques in the health care facility. The student will be able to:
	19.01 Describe the physical and mental preparation of the patient for EKG testing.
	19.02 Identify the patient and verify the requisition order.
	19.03 State precautions required when performing cardiovascular diagnostic procedures.
Course Number: MEA0584 Occupational Completion Point: E Clinical Assisting – 130 Hours	
20.0	Demonstrate basic office examination procedures. The student will be able to
	20.01 Prepare patients for and assist the provider with physical examinations, including, but not limited to, pre- and post-natal, male and female reproductive, to include PAP and rectal exams
	20.02 Educate the patient on breast and testicular self-examinations.

	20.03 Assist with pediatric procedures, to include weighing, measuring, and collecting specimens
	20.04 Educate patient utilizing the U.S. Department of Agriculture's “My Plate” Food Guide (https://www.myplate.gov/
	20.05 Educate patients on preparations for diagnostic procedures.
21.0	Demonstrate knowledge of the fundamentals of microbial control and use aseptic techniques. The student will be able to
	21.01 Identify and maintain common instruments and surgical supplies.
	21.02 Wrap and sterilize articles for autoclave.
	21.03 Create and maintain sterile fields for dressings and minor surgery.
	21.04 Prepare for minor surgical procedures, including informed consent, surgical hand wash, and applying sterile gloves
	21.05 Remove sutures and staples.
22.0	Demonstrate minor treatments. The student will be able to:
	22.01 Perform minor treatments as directed by the provider, including hot and cold therapy (which may include the following: hot water bag, heating pad, hot soaks and compresses, ice bag, cold compresses and packs).
	22.02 Assist the provider with minor surgery.
	22.03 Perform orthopedic procedures, including but not limited to the following: crutch measurements and instruction in the use of canes, crutches, walkers, and wheelchairs.
	22.04 Describe casting procedures and supplies.
	22.05 Apply all types of roller bandages using turns as appropriate.
	22.06 Demonstrate eye and ear irrigations.
23.0	Demonstrate knowledge of basic diagnostic medical assisting procedures. The student will be able to:
	23.01 Perform visual and auditory screening.
	23.02 Perform spirometry.
Course Number: MEA0943 **Occupational Completion Point: E** **Practicum Experience – 190 Hours**	
This “Practicum” experience is a supervised, unpaid activity of **a total of 200 hours,** of which 160 contact hours must be in an ambulatory health care setting and no more than 40 hours in a simulated laboratory setting performing administrative and clinical procedures, and must be completed	

prior to graduation. Students ready for the Practicum experience have completed all other program requirements and are eligible for this final phase in the program.

The program should ensure that the experience and instruction of students are meaningful and parallel in content and concept with the material presented in lecture and laboratory sessions. Sites should be selected so that each student is afforded a variety of experiences, while at the same time, all students are provided consistent learning opportunities. This experience provides an opportunity for students to utilize both administrative and clinical skills learned in the Medical Assistant classroom and clinical environment in a local clinic, provider's office, or other health care facility.

The students' practicum should be performed in a professional environment under conditions of strict supervision and guidance of a licensed provider and clinical coordinator. An individual who has knowledge of the medical assisting profession must provide on-site supervision of the student. When performed in the stimulated laboratory, all activities must be under the supervision of the medical assisting program/practicum coordinator or faculty. The content for any simulated laboratory activity will be at the discretion of each learning institution to best meet the needs of its students.

The actual hands-on experiences will tie in all the educational components based on theory and competency-based instruction that the student learned in the laboratory and classroom settings. This course is set to assess the student in their ability to utilize all critical thinking applications learned during the program and to apply these critical thinking skills during the Practicum experience. The healthcare facility and the learning college/institute will expect the student to utilize good work ethics, show excellent civic responsibilities, and further learn to both embrace and respect cultural diversity.

24.0	Perform administrative and general skills. The student will be able to:
24.01	Recognize and respond to verbal communication.
24.02	Maintain confidentiality and adhere to HIPAA regulations.
24.03	Understand how to document manually and electronically appropriately.
24.04	Understand how to schedule appointments manually and electronically accurately.
24.05	Understand how to schedule inpatient and/or outpatient procedures accurately.
24.06	Greet patients courteously and professionally.
24.07	Demonstrate safety and quality assurance in the workplace.
24.08	Perform clinical and general skills.
24.09	Demonstrate aseptic hand washing technique.
25.0	Dispose of biohazardous waste in appropriate containers. The student will be able to

	25.01 Adhere to sterilization techniques according to standards
	25.02 Practice standard precautions.
	25.03 Stage patients and obtain vital signs
	25.04 Obtain patient histories.
	25.05 Prepare and maintain examination and treatment area(s).
	25.06 Prepare patient for examinations and/or minor office procedures
	25.07 Assist with examinations and/or minor office procedures.
	25.08 Provide and document patient education
	25.09 Display professional work habits integral to medical assisting.
	25.10 Communicate appropriately in healthcare settings by listening, writing, speaking, and presenting with a professional demeanor.
26.0	Collaborate, communicate, and interact professionally with other health care professionals utilizing technology. The student will be able to
	26.01 Contribute to team efforts by fulfilling responsibilities and valuing diversity.
	26.02 Exercise proper judgment and critical thinking skills in decision making
	26.03 Adapt to changing organizational environments with flexibility.
	26.04 Report as expected, on time, appropriately dressed and groomed, and ready to work.
	26.05 Model acceptable work habits as defined by company policy
	26.06 Complete and follow through on tasks using time management skills and take initiative as warranted
	26.07 Respond appropriately and quickly to patients' needs and concerns
	26.08 Practice etiquette and social sensitivity in face-to-face interaction, on the telephone, and online.
	26.09 Actively adhere to policies and procedures that protect the patient's confidentiality and privacy
	26.10 Understand resources related to patients' healthcare needs

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as, experimental, quality, and safety procedures are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate and troubleshoot equipment/tools used to make observations. Students understand measurement error; and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

Special Notes

Although it is not required, it is strongly recommended that the programs meet the Standards and Guidelines of an Accredited Educational Program for the Medical Assistant adopted by the American Association of Medical Assistants and the Commission on Accreditation of Allied Health Education Programs (CAAHEP) or the American Medical Technologist and the Accrediting Bureau of Health Education Schools (ABHES).
For further information, contact:

Commission on Accreditation of Allied Health Education Programs (CAAHEP) www.caahep.org/
1361 Park Street, Clearwater, FL 33756, Phone: 727-210-2350/ Fax: 727-210-2354

Accrediting Bureau of Health Education Schools (ABHES) www.abhes.org/
777 Leesburg Pike, Suite 312, North Falls, VA 22043, (703) 917-9503

This program will also be in accordance with Florida Statute, Medical Assistants, 458.3485, F.S.

This program meets the Department of Health's education requirements for HIV/AIDS, Domestic Violence, and Prevention of Medical Errors. Although not a requirement for initial licensure, it is a requirement for renewal, therefore, the instructor **may** provide a certificate for renewal purposes to the student verifying these requirements have been met.

If students in this program are seeking a licensure, certificate, or registration through the Department of Health, please refer to 456.0635, F.S. for more information on disqualification for a license, certificate, or registration through the Department of Health.

Program completers of a CAAHEP or ABHES-accredited program are eligible to take the American Association of Medical Assistants' Certification Examination (CMA) or the American Medical Technologists' Certification Examination (RMA). For further information, contact:

American Association of Medical Assistants (AAMA) www.aama-ntl.org/
20 North Wacker Drive, Suite 1575, Chicago, Illinois 60606 (312-899-1500)
Or
American Medical Technologist (AMT) https://americanmedtech.org/
10700 West Higgins Road, Suite 150, Rosemont, Illinois 60018 (800-275-1268)

The Core should be taken first in the program. Following the successful completion of the core, the student is eligible to take the **National Health Care Foundation Skill Standards Assessment** with instructor approval and the completion of a portfolio.

Career and Technical Student Organization (CTSO)

CTSOs are co-curricular career and technical student organizations providing leadership training and reinforcing specific career and technical skills. Career and Technical Student Organizations provide activities for students as an integral part of the instruction offered. Other CTSOs not listed in this curriculum framework or recognized by the Florida Department of Education are permissible provided they support student mastery over the standards and benchmarks of this curriculum framework.

Cooperative Training – OJT

On-the-job training is appropriate but not required for this program. Whenever offered, the rules, guidelines, and requirements specified in the OJT framework apply.

Basic Skills

In Career Certificate programs offered for 450 hours or more, in accordance with Rule 6A-10.040, F.A.C., the minimum basic skills grade levels required for postsecondary adult career and technical students to complete this program are: Computation (Mathematics) and Communications (Reading and Language Arts). These grade level numbers correspond to a grade equivalent score obtained on a state designated basic skills examination.

Adult students with disabilities, as defined in s. 1004.02, F.S., may be exempted from meeting the Basic Skills requirements (Rule 6A-10.040, F.A.C.). Students served in exceptional student education (except gifted) as defined in s. 1003.01, F.S., may also be exempted from meeting the Basic Skills requirement. Each school district and Florida College System Institution must adopt a policy addressing procedures for exempting eligible students with disabilities from the Basic Skills requirement as permitted in s. 1004.91, F.S.

Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

Note: postsecondary curriculum and regulated secondary programs cannot be modified.

Florida Department of Education
Curriculum Framework

This program is a replacement for Nursing Assistant (Articulated) H170690 (0351390203).

Program Title: **Nursing Assistant**
Program Type: **Career Preparatory**
Career Cluster: **Health Science**

Career Certificate Program	
Program Number	H700400
CIP Number	0351390206
Grade Level	30, 31
Program Length	165 hours
Teacher Certification	Refer to the **Program Structure** section.
CTSO	HOSA, SkillsUSA
SOC Codes (all applicable)	For program SOC codes, please see the Program and Course Tables section of the CTE Program Resources page linked below.
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml
Basic Skills Level	N/A

Purpose

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Health Science career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of Health Science career cluster. This program is designed to prepare students for employment as nursing assistants.

The content includes but is not limited to interpersonal skills, medical terminology, legal and ethical responsibilities, safe and efficient work, gerontology, nutrition, pet-facilitated therapy, health and safety including Cardio-pulmonary Resuscitation (CPR) – heart saver level, and employability skills.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Program Structure

This program is a planned sequence of instruction consisting of 1 occupational completion point.

This program is comprised of a course that has been assigned course numbers in the SCNS (Statewide Course Numbering System) in accordance with Section 1007.24 (1), F.S. Career and Technical credit shall be awarded to the student on a transcript in accordance with Section 1001.44(3) (b), F.S.

To teach the courses listed below, instructors must hold at least one of the teacher certifications indicated for that course.

The following table illustrates the postsecondary program structure:

OCP	Course Number	Course Title	Teacher Certification	Length
A	HCP0124	Nursing Assistant	REG NURSE 7 G LPN 7 G* PRAC NURSE @7 %7%G (Must be a Registered Nurse)	165 hours

**** The LPN 7 G district issued certification is a practical nurse. A practical nurse can only be utilized as an instructor of the CNA training program when they are supervised by the program coordinator, who must be a registered nurse. Please refer to 64B9-15.005, F.A.C., for requirements.***

Regulated Programs

Successful completion of this program from an approved school prepares the student for certification for employment as a Nursing Assistant, in accordance with Chapter 464.203, Florida Statutes (F.S.). To be approved, this program must be supervised by a registered nurse and follow the faculty qualifications set forth in 64B9-15.005(3)(a), F.A.C.

New programs must be approved by the Board of Nursing, Department of Health prior to enrolling students.

Those students who satisfactorily complete an approved course are eligible to apply to take the national nursing assistant examination being utilized in Florida, in accordance with Chapter 464.203, F.S. This program includes both Acute and Long Term Care.

In accordance with 64B9-15.005, F.A.C., students will perform nursing skills in the clinical and simulated laboratory settings under the supervision of a qualified instructor. The recommended teacher/student ratio in the clinical area is 1 to 12, but the maximum is 1 to 15.

In accordance with 64B9-15.006(2), F.A.C., The standardized curriculum shall require a minimum of 80 hours of classroom and 40 hours of clinical instruction. The clinical instruction shall include at least 20 hours of long-term care clinical instruction in a licensed nursing home.

In accordance with 64B9-15.006(3), F.A.C., Prior to any direct contact with a resident, a training program shall require that a student receive a minimum of 16 hours of classroom instruction in communication and interpersonal skills; infection control; safety/emergency procedures, including the Heimlich maneuver; promoting residents' independence; and respecting residents' rights.

According to Section 400.211, F.S., persons who are enrolled in, or have completed, a state-approved nursing assistant training program may be employed by a licensed nursing facility for a period of four months. However, the certification requirements must be met within four months of such initial employment.

Florida's Career Readiness Skills for CTE Programs

Employability Skills	
01.0	Apply academic skills to workplace scenarios.
01.01	Use reading skills.
01.02	Use writing skills.
01.03	Use mathematical strategies and procedures.
01.04	Use scientific principles and procedures.
02.0	Design a solution to an industry problem.
02.01	Use critical thinking.
02.02	Use creativity.
02.03	Make sound decisions.
02.04	Solve problems.
02.05	Reason.
02.06	Plan and organize.
03.0	Manage resources within an industry project
03.01	Manage time.
03.02	Manage money or resources.
03.03	Manage materials.
03.04	Manage personnel.
04.0	Oversee the subcomponents, operations and output of a technical or organizational system.
04.01	Manage systems.
04.02	Monitor systems.
04.03	Improve systems.
05.0	Use information for decision making.
05.01	Locate information.
05.02	Organize information.
05.03	Use information.

	05.04 Analyze information.
	05.05 Communicate information.
06.0	Apply relevant technology to workplace scenarios to aid productivity.
	06.01 Use technology.
07.0	Interpret and express interpersonal communication.
	07.01 Communicate verbally.
	07.02 Listen actively.
	07.03 Comprehend written material.
	07.04 Convey information in writing.
	07.05 Communicate nonverbally.
	07.06 Interpret nonverbal communication.
08.0	Interact with others to accomplish workplace goals.
	08.01 Collaborate with others in a team.
	08.02 Respond to customer needs.
	08.03 Exercise leadership.
	08.04 Negotiate to resolve conflict.
	08.05 Respect others.
09.0	Manage personal behavior to maximize productivity and professional growth.
	09.01 Demonstrate responsibility and self-discipline.
	09.02 Adapt and show flexibility.
	09.03 Work independently.
	09.04 Demonstrate a willingness to learn.
	09.05 Demonstrate integrity.
	09.06 Demonstrate professionalism.
	09.07 Take initiative.
	09.08 Display positive attitude.
	09.09 Take responsibility for professional growth.

Job Attainment	
10.0	Find, assess and apply to job opportunities.
	10.01 Identify online job posts relevant to his or her career aspirations.
	10.02 Compare and contrast the job posts' required qualifications, job duties, compensation, benefits and employers.
	10.03 Define what information, documentation and writing prompts are required for the positions.
11.0	Communicate personal competence, character and fit for a job opportunity.
	11.01 Develop a resume.
	11.02 Write a cover letter.
	11.03 Curate a professional portfolio that includes work products.
	11.04 Prepare for and experience a mock job interview.
12.0	Cultivate and leverage relationships to professionally advance.
	12.01 Request a signed reference letter, letter of recommendation and/or an online skill/professionalism endorsement.
	12.02 Develop a plan to cultivate a professional digital footprint.
	12.03 Develop a networking plan for a specific industry of interest.

Standards

After successfully completing this program, the student will be able to perform the following:

01.0 Demonstrate knowledge of the healthcare delivery system and health occupations.
02.0 Use verbal, written, and/or electronic communications specific to the nurse assistant.
03.0 Demonstrate legal and ethical responsibilities specific to the nurse assistant.
04.0 Apply basic math and science skills specific to the nurse assistant.
05.0 Describe the anatomy and physiology of the human body.
06.0 Demonstrate an understanding of and apply wellness and disease concepts.
07.0 Perform physical comfort and safety functions specific to the nurse assistant.
08.0 Apply the principles of infection control specific to the nurse assistant.
09.0 Demonstrate knowledge of blood-borne diseases.
10.0 Recognize and respond to emergency situations.
11.0 Perform supervised organizational functions following the patient care plan.
12.0 Provide biological, psychological, and social support.
13.0 Provide personal patient care.
14.0 Perform patient care procedures.
15.0 Apply principles of nutrition.
16.0 Provide care for geriatric patients.
17.0 Assist with restorative (rehabilitative) activities.
18.0 Demonstrate an understanding of information technology applications in healthcare.
19.0 Demonstrate employability skills.

Florida Department of Education
Student Performance Standards

Program Title: Nursing Assistant
Career Certificate Program Number: H700400

Course Number: HCP0124 **Occupational Completion Point: A** **Nursing Assistant -- 165 Hours**	
01.0	Demonstrate knowledge of the healthcare delivery system and health occupations. The student will be able to:
01.01	Identify the basic components of the healthcare delivery system, including public, private, government, and non-profit.
01.02	Describe the various types of healthcare providers and the range of services available, including resources to victims of domestic violence.
01.03	Describe the composition and functions of a healthcare team.
01.04	Identify the general roles and responsibilities of the individual members of the healthcare team.
01.05	Identify characteristics of effective teams.
01.06	Recognize methods for building positive team relationships.
01.07	Discuss attributes and attitudes of an effective leader.
01.08	Recognize factors and situations that may lead to conflict.
01.09	Recognize effective techniques for managing team conflict.
02.0	Use verbal, written, and/or electronic communications specific to the nurse assistant. The student will be able to:
02.01	Develop basic speaking and active listening skills.
02.02	Identify successful and unsuccessful communication characteristics, including communication styles and barriers.
02.03	Identify characteristics of verbal and non-verbal cues.
02.04	Describe the purpose of the chain of communication to resolve conflict.
02.05	Use appropriate medical terminology and abbreviations.
02.06	Obtain specified data from the patient and family.

	02.07	Utilize verbal and written information to assist with the patient's plan of care.
	02.08	Distinguish between and report subjective and objective information.
	02.09	Discuss the importance of patient/client education regarding healthcare.
	02.10	Adapt communication skills to varied levels of understanding and cultural orientation, including, but not limited to, diverse age, cultural, economic, ethnic, and religious groups.
	02.11	Demonstrate the use of the communication systems, including electronic health record systems.
03.0	Demonstrate legal and ethical responsibilities specific to the nurse assistant. The student will be able to:	
	03.01	Discuss and demonstrate legal and ethical behavior within the nursing assistant's scope of practice, including, but not limited to, role limitations in Florida.
	03.02	Describe a code of ethics consistent with the nursing assistant occupation.
	03.03	Explain the laws governing harassment, labor, and employment.
	03.04	Follow policies and procedures affecting the health, safety, and well-being of patients.
	03.05	Demonstrate safe standards of patient care, including prevention and quality of care.
	03.06	Exhibit behavior supporting and promoting patients’ and/or residents' rights.
	03.07	Describe advance directives.
	03.08	Explain the procedures for accurate documentation and record keeping.
	03.09	Recognize the potential for and prevention of medical errors and practice the proper procedures to follow regarding medical errors.
	03.10	Follow policies and procedures affecting the health, safety, and well-being of patients.
	03.11	Recognize and report signs of substance abuse.
	03.12	Demonstrate the understanding of vulnerable population abuse and reporting procedures per agency.
	03.13	Recognize and report illegal and/or unethical practices of healthcare workers.
	03.14	Recognize and report abuse, including domestic violence, neglect, and suspected human trafficking.
	03.15	Recognize that a CNA must self-report any crimes they’ve been involved in within 30 days of the offense in accordance with Florida Statutes.
	03.16	Explain practices that could result in malpractice, liability, negligence, abandonment, false imprisonment, and fraud.
	03.17	Define Omnibus Budget Reconciliation Act (OBRA).

	03.18 Define Minimum Data Set (MDS).
	03.19 Identify and explain the standards of the Health Insurance Portability and Accountability Act (HIPAA).
04.0	Apply basic math and science skills specific to the nurse assistant. The student will be able to:
	04.01 Demonstrate knowledge of Celsius and Fahrenheit temperature and the conversion of each.
	04.02 Calculate ratios.
	04.03 Make, use, and convert data using traditional and metric units.
	04.04 Make estimations and approximations; then judge the reasonableness of the results and demonstrate the ability to evaluate and draw conclusions.
	04.05 Convert from regular time to 24-hour time.
	04.06 Organize and communicate results obtained by observation.
05.0	Describe the anatomy and physiology of the human body. The student will be able to:
	05.01 Describe the basic structure and function of the human body.
	05.02 Describe the relationships of body systems in providing patient care.
	05.03 Recognize abnormal signs and symptoms of common diseases and conditions.
06.0	Demonstrate an understanding of and apply wellness and disease concepts. The student will be able to:
	06.01 Describe strategies for the prevention of diseases, including health screenings and examinations.
	06.02 Identify personal health practices and environmental factors that affect the optimal function of each of the major body systems.
	06.03 Identify psychological reactions to illnesses, including defense mechanisms.
	06.04 Identify complementary and alternative health practices.
	06.05 Discuss the adverse effects of the use of alcohol, tobacco, and both legal and illegal drugs on the human body and apply safety practices related to these and other high-risk behaviors.
	06.06 Explain the basic concepts of positive self-image, wellness, and stress.
	06.07 Develop a wellness and stress control plan that can be used in personal and professional life.
07.0	Perform physical comfort and safety functions specific to the nurse assistant. The student will be able to:

	07.01	Implement appropriate regulatory and accrediting agency patient safety guidelines, including but not limited to the Joint Commission.
	07.02	Explain personal safety procedures based on Occupational Safety and Health Administration (OSHA) and the Centers for Disease Control (CDC) regulations, including standard precautions.
	07.03	Recognize Safety Data Sheets and comply with safety signs, symbols, and labels.
	07.04	Maintain safe patient units, equipment, and a comfortable environment.
	07.05	Maintain service areas on the units, including supplies and equipment.
	07.06	Explain the procedure for properly identifying patients.
	07.07	Observe, report, and record changes in the patient's behavior as needed, including mental awareness.
	07.08	Demonstrate adjustment of bed and side rails according to facility policy.
	07.09	Demonstrate and assist the patient in dangling.
	07.10	Explain and demonstrate proper body mechanics and ergonomics, and use assistive devices to safely transfer and support patients.
	07.11	Demonstrate lifting, supporting, and transferring patients from bed to chair, bed to bed, and bed to stretcher, including the use of the various assistive devices and equipment while utilizing proper body mechanics and patient safety measures.
	07.12	Demonstrate the proper use of a gait/transfer belt in transfer and ambulation.
	07.13	Assist patient in ambulation, including the use of a crutch, cane, or walker.
	07.14	Demonstrate the proper wheelchair safety techniques and assist the patient as needed with use.
	07.15	Apply supportive devices as directed (e.g., footboard, over-bed cradle, alternating pressure mattress).
	07.16	Assist patient with care and use of prosthetic/orthotic devices.
08.0	Apply the principles of infection control specific to the nurse assistant. The student will be able to:	
	08.01	Identify and implement transmission-based precautions and standard infection control procedures.
	08.02	Recognize emerging diseases and disorders.
	08.03	Explain medical and surgical asepsis.
	08.04	Explain and demonstrate proper hand hygiene.
	08.05	Identify the chain of infection.

	08.06	Provide care for patients with infectious diseases while applying the principles of standard and transmission-based precautions.
	08.07	Apply the proper use of personal protective equipment (PPE) for all types of isolation, including donning and removing PPE appropriately.
	08.08	Describe how to correctly dispose of biohazardous materials according to appropriate government guidelines, such as OSHA.
	08.09	Follow isolation procedure with food trays, PPE, and other supplies/equipment.
	08.10	Collect a specimen from a patient in isolation.
09.0	Demonstrate knowledge of blood-borne diseases. The student will be able to:	
	09.01	Describe blood-borne diseases.
	09.02	Distinguish between fact and fallacy about the transmission and treatment of diseases caused by blood-borne pathogens.
	09.03	Identify community resources and services available to individuals with diseases caused by blood-borne pathogens.
	09.04	Identify “at-risk” behaviors which promote the spread of diseases caused by blood-borne pathogens and the public education necessary to combat the spread of these diseases.
	09.05	Explain the legal aspects of HIV/AIDS, including testing.
10.0	Recognize and respond to emergency situations. The student will be able:	
	10.01	Describe emergency procedures utilized in the clinical area(s) and the role of the nursing assistant in these procedures.
	10.02	Recognize fire, safety, disaster, and evacuation procedures.
	10.03	Obtain and maintain training for certification on cardiopulmonary resuscitation (CPR), automated external defibrillator (AED), foreign body airway obstruction (FBAO), and first aid.
	10.04	Recognize adverse drug-related emergencies and take appropriate first aid action.
11.0	Perform supervised organizational functions following the patient care plan. The student will be able to:	
	11.01	Organize and prioritize patient-care assignments.
	11.02	Complete assignments accurately and promptly.
12.0	Provide biological, psychological, and social support. The student will be able to:	
	12.01	Discuss family roles and their significance to health.
	12.02	Respond to patient and family emotional needs.

13.0	Provide personal patient care. The student will be able to:
	13.01 Perform bed bath; observe and report changes in a patient, including skin and level of consciousness.
	13.02 Assist with shower or tub bath, including the use of specialty tubs or prepackaged disposable-bagged baths.
	13.03 Administer back rub with bath and as needed.
	13.04 Assist patient with hair care utilizing sink, tub, shower, bed, or shower cap.
	13.05 Demonstrate the use of a safety and/or electric razor to shave the patient.
	13.06 Demonstrate how to groom the patient, including hair, skin, foot, hand, and nail care.
	13.07 Assist with and/or administer oral hygiene, including denture care.
	13.08 Assist the patient to dress.
	13.09 Assist patient with toileting using various types of restorative and rehabilitative equipment.
	13.10 Assist patient with use of bedpan (standard and fracture).
	13.11 Assist with bowel and bladder training.
	13.12 Assist and/or provide perineal care.
	13.13 Empty, measure, and record urinary output and/or drainage.
	13.14 Demonstrate the application and use of a leg bag, leg strap, and dignity bag.
	13.15 Monitor and assist with the drainage of urostomy bags and colostomy bags.
	13.16 Assist patient with both donning and doffing prostheses and braces.
	13.17 Assist patient with meals.
	13.18 Describe the relationships of body systems when providing patient care.
14.0	Perform patient care procedures. The student will be able to:
	14.01 Demonstrate ability to accurately measure, record, and report vital signs.
	14.02 Demonstrate ability to recognize and report vital signs outside of normal parameters.
	14.03 Assist with the admission, transfer, and discharge of a patient and/or resident.

14.04	Maintain patient belongings list
14.05	Make an unoccupied and occupied bed.
14.06	Provide range-of-motion exercises, including, but not limited to, passive, active, and active-assisted.
14.07	Apply anti-embolic hose and sequential compression devices.
14.08	Understand and demonstrate proper collection of routine, timed urine, and clean-catch urine specimens.
14.09	Record fluid intake and output (I&O).
14.10	Observe, record, and report the patient's emesis.
14.11	Monitor and provide urinary catheter care and drainage systems.
14.12	Assist with ostomy care, including emptying or changing ostomy bags that do not adhere to the skin.
14.13	Collect stool specimen.
14.14	Assist with the collection of a sputum specimen.
14.15	Assist the patient in applying binders.
14.16	Care for the patient in skin and skeletal traction.
14.17	Assist with pre-operative and post-operative patient care.
14.18	Reinforce dressings under the supervision of the RN/LPN.
14.19	Obtain and record an apical pulse.
14.20	Provide cast care and/or pin care.
14.21	Provide care for visual devices, including but not limited to eyeglasses, artificial eyes, and contact lenses.
14.22	Provide care for hearing devices.
15.0	Apply principles of nutrition. The student will be able to:
15.01	Identify nutrients and food groups.
15.02	Identify and develop basic food plans.
15.03	Check the patient's diet tray for accuracy.

	15.04 Monitor and document nutritional intake.
	15.05 Identify and implement regional, cultural, and religious food guidelines and preferences.
	15.06 Demonstrate knowledge of the need for thickened liquids and fluid consistency.
	15.07 Identify methods of maintaining fluid balance, including encouraging and restricting fluids.
	15.08 Explore and utilize the U.S. Department of Agriculture's nutrition resources.
16.0	Provide care for geriatric patients. The student will be able to:
	16.01 Identify and assist with methods and procedures to maintain skin integrity, including but not limited to, preventing pressure ulcers.
	16.02 Identify and assist with methods to prevent falls in the elderly.
	16.03 Identify and assist with safety principles as related to the elderly.
	16.04 Describe general characteristics, particular needs, and age-related changes of the elderly.
	16.05 Identify attitudes and living habits that promote positive mental and physical health for the elderly.
	16.06 Distinguish between fact and fallacy about the aging process.
	16.07 Apply reality orientation techniques and validation therapy unless it is contraindicated by the patient's diagnosis.
	16.08 Recognize and respond appropriately to symptoms of common diseases, including dementia, depression, suicide, and Alzheimer's.
	16.09 Provide and involve patients in diversional activities.
	16.10 Identify common alterations in elderly patient behavior.
	16.11 Provide care for patients with special needs, including but not limited to physical and cognitive impairments.
	16.12 Demonstrate awareness of common behaviors in drug use and abuse in the elderly.
	16.13 Report concerns to the nurse and appropriate authorities related to drug use and abuse in the elderly patient.
	16.14 Identify the need for community resources and services available to the elderly and their caregiver.
	16.15 Identify components of the grief process.
	16.16 Demonstrate an understanding of end-of-life care, hospice, and palliative care.
17.0	Assist with restorative (rehabilitative) activities. The student will be able to:

	17.01 List the purposes of a restorative (rehabilitation) program.
	17.02 Assist patient with specified restorative (rehabilitation) needs.
	17.03 Assist patients to reach the optimum level of independence.
18.0	Demonstrate an understanding of information technology applications in healthcare. The student will be able to:
	18.01 Define terms and demonstrate basic computer skills.
	18.02 Recognize and/or describe technology applications in healthcare that are specific to the nursing assistant occupation.
	18.03 Recognize new and emerging technology in healthcare.
19.0	Demonstrate employability skills. The student will be able to:
	19.01 Identify personal traits or attitudes desirable in a nursing assistant.
	19.02 Exemplify basic professional standards of a nursing assistant as they apply to hygiene, dress, language, confidentiality, and behavior, including but not limited to phone, email, and social media etiquette.
	19.03 Identify documents that may be required when applying for a job.
	19.04 Write an appropriate resume.
	19.05 Conduct a job search.
	19.06 Complete a job application form correctly.
	19.07 Examine levels of education and credentialing requirements, including licensure and certification, employment opportunities, workplace environments, and career growth potential.
	19.08 Identify acceptable work habits.
	19.09 Recognize appropriate, effective, and professional behavior.
	19.10 Compare careers within the health science career pathways.

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools, and equipment, as well as experimental, quality, and safety procedures, are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate, and troubleshoot equipment/tools used to make observations. Students understand measurement error and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

Special Notes

The program focuses on broad, transferable skills and stresses understanding and demonstration of the following elements of the health care industry: planning, management, finance, technical and production skills, underlying principles of technology, labor issues, community issues, and health, safety, and environmental issues.

This program meets the Department of Health's education requirements for HIV/AIDS, Domestic Violence and Prevention of Medical Errors. Although not a requirement for initial licensure, it is a requirement for renewal, therefore the instructor **may** provide a certificate for renewal purposes to the student verifying these requirements have been met.

If students in this program are seeking a licensure, certificate, or registration through the Department of Health, please refer to 456.0635, F.S. for more information on disqualification for a license, certificate, or registration through the Department of Health.

The length of this program is 165 hours. Completion of this program should enable the postsecondary student to be given advanced standing in the Patient Care Technician and Patient Care Assistant programs.

The Core should be taken first in the program. Following the successful completion of the core, the student is eligible to take the National Health Care Foundation Skill Standards Assessment with instructor approval and the completion of a portfolio.

Career and Technical Student Organization (CTSO)

CTSOs are co-curricular career and technical student organizations providing leadership training and reinforcing specific career and technical skills. Career and Technical Student Organizations provide activities for students as an integral part of the instruction offered. Other CTSOs not listed in this curriculum framework or recognized by the Florida Department of Education are permissible provided they support student mastery over the standards and benchmarks of this curriculum framework.

Cooperative Training – OJT

On-the-job training is appropriate but not required for this program. Whenever offered, the rules, guidelines, and requirements specified in the OJT framework apply.

Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology, and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

Note: postsecondary curriculum and regulated secondary programs cannot be modified.

Florida Department of Education
Curriculum Framework

This program is a replacement for Patient Care Assistant H170692 (0351390202). Starting with 2026-27, the program length has changed from 290 clock hours to 235 clock hours.

Program Title: **Patient Care Assistant**
Program Type: **Career Preparatory**
Career Cluster: **Health Science**

Career Certificate Program	
Program Number	H700500
CIP Number	0351390207
Grade Level	30, 31
Program Length	235 hours
Teacher Certification	Refer to the **Program Structure** section.
CTSO	HOSA, SkillsUSA
SOC Codes (all applicable)	For program SOC codes, please see the Program and Course Tables section of the CTE Program Resources page linked below.
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml
Basic Skills Level	N/A

Purpose

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Health Science career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of Health Science career cluster.

This program is designed to prepare students for employment as cross-trained nursing assistants. All others, Patient Care Assistants, Nursing Assistants, or Home Health Aides. This program offers a broad foundation of knowledge and skills, expanding the traditional role of the nursing assistant, for both acute and long-term care settings.

The content includes but is not limited to broad, transferable skills and that stresses understanding and demonstration of the following elements of the health care industry: planning, management, finance, technical and production skills, underlying principles of technology, labor issues, community issues, and health, safety, and environmental issues.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Program Structure

This program is a planned sequence of instruction consisting of 3 occupational completion points.

This program is comprised of courses which have been assigned course numbers in the SCNS (Statewide Course Numbering System) in accordance with Section 1007.24 (1), F.S. Career and Technical credit shall be awarded to the student on a transcript in accordance with Section 1001.44(3) (b), F.S.

To teach the courses listed below, instructors must hold at least one of the teacher certifications indicated for that course.

The following table illustrates the postsecondary program structure:

OCP	Course Number	Course Title	Teacher Certification	Length
A	HCP0124	Nursing Assistant	REG NURSE 7 G LPN 7 G* PRAC NURSE @7 %7%G (Must be a Registered Nurse)	165 hours
B	HCP0333	Accelerated Home Health Aide		25 hours
C	HCP0021	Patient Care Assistant	REG NURSE 7 G PRAC NURSE @7 %7%G (Must be a Registered Nurse)	45 hours

**** The LPN 7 G district issued certification is a practical nurse. A practical nurse can only be utilized as an instructor of the CNA training program when they are supervised by the program coordinator who must be a registered nurse. Please refer to 64B9-15.005, F.A.C., for requirements.***

Regulated Programs

Successful completion of this program from an approved school prepares the student for certification for employment as a Nursing Assistant in a nursing home, in accordance with Chapter 464.203, Florida Statutes (F.S.). To be approved, this program must be supervised by a registered nurse and follow the faculty qualifications set forth in 64B9-15.005(3)(a), F.A.C.

New programs must be approved by the Board of Nursing, Department of Health prior to enrolling students.

Those students who satisfactorily complete an approved course are eligible to apply to take the national nursing assistant examination being utilized in Florida, in accordance with Chapter 464.203, F.S. This program includes both Acute and Long-Term Care.

In accordance with 64B9-15.005, F.A.C., students will perform nursing skills in the clinical and simulated laboratory settings under the supervision of a qualified instructor. The recommended teacher/student ratio in the clinical area is 1 to 12, but the maximum is 1 to 15.

In accordance with 64B9-15.006, F.A.C., Clinical and simulated laboratory learning experiences must correlate with 80 hours of didactic instruction. In addition, a minimum of 40 hours of clinical experiences must be obtained. Simulated labs are not a substitute for clinical experience. The clinical instruction shall include at least 20 hours of long-term care clinical instruction in a licensed nursing home or licensed long-term care facility.

In addition, Students must have a minimum of 16 hours of training in communication and interpersonal skills, infection control, safety/emergency procedures, promoting residents' independence, and respecting residents' rights prior to any direct contact with a resident.

According to Section 400.211, F.S., persons who are enrolled in, or have completed, a state-approved nursing assistant training program may be employed by a licensed nursing facility for a period of four months. However, the certification requirements must be met within four months of such initial employment.

Students must have a minimum of 16 hours of training in communication and interpersonal skills, infection control, safety/emergency procedures, promoting residents' independence, and respecting residents' rights prior to any direct contact with a resident.

Please refer to 42CFR§484 for the clinical requirements for the Home Health Aide program.

Florida's Career Readiness Skills for CTE Programs

Employability Skills	
01.0	Apply academic skills to workplace scenarios.
01.01	Use reading skills.
01.02	Use writing skills.
01.03	Use mathematical strategies and procedures.
01.04	Use scientific principles and procedures.
02.0	Design a solution to an industry problem.
02.01	Use critical thinking.
02.02	Use creativity.
02.03	Make sound decisions.
02.04	Solve problems.
02.05	Reason.
02.06	Plan and organize.
03.0	Manage resources within an industry project
03.01	Manage time.
03.02	Manage money or resources.
03.03	Manage materials.
03.04	Manage personnel.
04.0	Oversee the subcomponents, operations and output of a technical or organizational system.
04.01	Manage systems.
04.02	Monitor systems.
04.03	Improve systems.
05.0	Use information for decision making.
05.01	Locate information.
05.02	Organize information.
05.03	Use information.

	05.04 Analyze information.
	05.05 Communicate information.
06.0	Apply relevant technology to workplace scenarios to aid productivity.
	06.01 Use technology.
07.0	Interpret and express interpersonal communication.
	07.01 Communicate verbally.
	07.02 Listen actively.
	07.03 Comprehend written material.
	07.04 Convey information in writing.
	07.05 Communicate nonverbally.
	07.06 Interpret nonverbal communication.
08.0	Interact with others to accomplish workplace goals.
	08.01 Collaborate with others in a team.
	08.02 Respond to customer needs.
	08.03 Exercise leadership.
	08.04 Negotiate to resolve conflict.
	08.05 Respect others.
09.0	Manage personal behavior to maximize productivity and professional growth.
	09.01 Demonstrate responsibility and self-discipline.
	09.02 Adapt and show flexibility.
	09.03 Work independently.
	09.04 Demonstrate a willingness to learn.
	09.05 Demonstrate integrity.
	09.06 Demonstrate professionalism.
	09.07 Take initiative.
	09.08 Display positive attitude.
	09.09 Take responsibility for professional growth.

Job Attainment	
10.0	Find, assess and apply to job opportunities.
10.01	Identify online job posts relevant to his or her career aspirations.
10.02	Compare and contrast the job posts' required qualifications, job duties, compensation, benefits and employers.
10.03	Define what information, documentation and writing prompts are required for the positions.
11.0	Communicate personal competence, character and fit for a job opportunity.
11.01	Develop a resume.
11.02	Write a cover letter.
11.03	Curate a professional portfolio that includes work products.
11.04	Prepare for and experience a mock job interview.
12.0	Cultivate and leverage relationships to professionally advance.
12.01	Request a signed reference letter, letter of recommendation and/or an online skill/professionalism endorsement.
12.02	Develop a plan to cultivate a professional digital footprint.
12.03	Develop a networking plan for a specific industry of interest.

Standards

After successfully completing this program, the student will be able to perform the following:

01.0 Demonstrate knowledge of the healthcare delivery system and health occupations.
02.0 Use verbal, written, and/or electronic communications specific to the nurse assistant.
03.0 Demonstrate legal and ethical responsibilities specific to the nurse assistant.
04.0 Apply basic math and science skills specific to the nurse assistant.
05.0 Describe the anatomy and physiology of the human body.
06.0 Demonstrate an understanding of and apply wellness and disease concepts.
07.0 Perform physical comfort and safety functions specific to the nurse assistant.
08.0 Apply the principles of infection control specific to the nurse assistant.
09.0 Demonstrate knowledge of blood-borne diseases.
10.0 Recognize and respond to emergency situations.
11.0 Perform supervised organizational functions following the patient care plan.
12.0 Provide biological, psychological, and social support.
13.0 Provide personal patient care.
14.0 Perform patient care procedures.
15.0 Apply principles of nutrition.
16.0 Provide care for geriatric patients.
17.0 Assist with restorative (rehabilitative) activities.
18.0 Demonstrate an understanding of information technology applications in healthcare.
19.0 Demonstrate employability skills.
20.0 Use verbal and written communications specific to the Home Health Aide.
21.0 Demonstrate legal and ethical responsibilities specific to the Home Health Aide.
22.0 Perform physical comfort and safety functions specific to the Home Health Aide.
23.0 Apply principles of nutrition specific to the Home Health Aide.
24.0 Apply the principles of infection control specific to the Home Health Aide.
25.0 Perform home health-care services.
26.0 Perform nursing assistant skills related to the hospital setting.
27.0 Provide nursing assistant care for the adult patient.

Florida Department of Education
Student Performance Standards

Program Title: Patient Care Assistant
Career Cluster Program Number: H700500

Course Number: HCP0124 **Occupational Completion Point: A** **Nursing Assistant – 165 Hours**	
The following intended outcomes 1-19 should be taught together as a module to achieve the occupational completion point of Nursing Assistant.	
01.0	Demonstrate knowledge of the healthcare delivery system and health occupations. The student will be able to:
01.01	Identify the basic components of the healthcare delivery system, including public, private, government, and non-profit.
01.02	Describe the various types of healthcare providers and the range of services available, including resources to victims of domestic violence.
01.03	Describe the composition and functions of a healthcare team.
01.04	Identify the general roles and responsibilities of the individual members of the healthcare team.
01.05	Identify characteristics of effective teams.
01.06	Recognize methods for building positive team relationships.
01.07	Discuss attributes and attitudes of an effective leader.
01.08	Recognize factors and situations that may lead to conflict.
01.09	Recognize effective techniques for managing team conflict.
02.0	Use verbal, written, and/or electronic communications specific to the nurse assistant. The student will be able to:
02.01	Develop basic speaking and active listening skills.
02.02	Identify successful and unsuccessful communication characteristics, including communication styles and barriers.
02.03	Identify characteristics of verbal and non-verbal cues.
02.04	Describe the purpose of the chain of communication to resolve conflict.
02.05	Use appropriate medical terminology and abbreviations.

	02.06	Obtain specified data from the patient and family.
	02.07	Utilize verbal and written information to assist with the patient's plan of care.
	02.08	Distinguish between and report subjective and objective information.
	02.09	Discuss the importance of patient/client education regarding healthcare.
	02.10	Adapt communication skills to varied levels of understanding and cultural orientation, including, but not limited to, diverse age, cultural, economic, ethnic, and religious groups.
	02.11	Demonstrate the use of the communication systems, including electronic health record systems.
03.0	Demonstrate legal and ethical responsibilities specific to the nurse assistant. The student will be able to:	
	03.01	Discuss and demonstrate legal and ethical behavior within the nursing assistant's scope of practice, including, but not limited to, role limitations in Florida.
	03.02	Describe a code of ethics consistent with the nursing assistant occupation.
	03.03	Explain the laws governing harassment, labor, and employment.
	03.04	Follow policies and procedures affecting the health, safety, and well-being of patients.
	03.05	Demonstrate safe standards of patient care, including prevention and quality of care.
	03.06	Exhibit behavior supporting and promoting patients’ and/or residents' rights.
	03.07	Describe advance directives.
	03.08	Explain the procedures for accurate documentation and record keeping.
	03.09	Recognize the potential for and prevention of medical errors and practice the proper procedures to follow regarding medical errors.
	03.10	Follow policies and procedures affecting the health, safety, and well-being of patients.
	03.11	Recognize and report signs of substance abuse.
	03.12	Demonstrate the understanding of vulnerable population abuse and reporting procedures per agency.
	03.13	Recognize and report illegal and/or unethical practices of healthcare workers.
	03.14	Recognize and report abuse, including domestic violence, neglect, and suspected human trafficking.
	03.15	Recognize that a CNA must self-report any crimes they’ve been involved in within 30 days of the offense in accordance with Florida Statutes.
	03.16	Explain practices that could result in malpractice, liability, negligence, abandonment, false imprisonment, and fraud.

	03.17 Define Omnibus Budget Reconciliation Act (OBRA).
	03.18 Define Minimum Data Set (MDS).
	03.19 Identify and explain the standards of the Health Insurance Portability and Accountability Act (HIPAA).
04.0	Apply basic math and science skills specific to the nurse assistant. The student will be able to:
	04.01 Demonstrate knowledge of Celsius and Fahrenheit temperature and the conversion of each.
	04.02 Calculate ratios.
	04.03 Make, use, and convert data using traditional and metric units.
	04.04 Make estimations and approximations; then judge the reasonableness of the results and demonstrate the ability to evaluate and draw conclusions.
	04.05 Convert from regular time to 24-hour time.
	04.06 Organize and communicate results obtained by observation.
05.0	Describe the anatomy and physiology of the human body. The student will be able to:
	05.01 Describe the basic structure and function of the human body.
	05.02 Describe the relationships of body systems in providing patient care.
	05.03 Recognize abnormal signs and symptoms of common diseases and conditions.
06.0	Demonstrate an understanding of and apply wellness and disease concepts. The student will be able to:
	06.01 Describe strategies for the prevention of diseases, including health screenings and examinations.
	06.02 Identify personal health practices and environmental factors that affect the optimal function of each of the major body systems.
	06.03 Identify psychological reactions to illnesses, including defense mechanisms.
	06.04 Identify complementary and alternative health practices.
	06.05 Discuss the adverse effects of the use of alcohol, tobacco, and both legal and illegal drugs on the human body and apply safety practices related to these and other high-risk behaviors.
	06.06 Explain the basic concepts of positive self-image, wellness, and stress.
	06.07 Develop a wellness and stress control plan that can be used in personal and professional life.

07.0	Perform physical comfort and safety functions specific to the nurse assistant. The student will be able to:
07.01	Implement appropriate regulatory and accrediting agency patient safety guidelines including Joint Commission.
07.02	Explain personal safety procedures based on Occupational Safety and Health Administration (OSHA) and the Centers for Disease Control (CDC) regulations, including standard precautions.
07.03	Recognize Safety Data Sheets and comply with safety signs, symbols, and labels.
07.04	Maintain safe patient units, equipment, and a comfortable environment.
07.05	Maintain service areas on the units, including supplies and equipment.
07.06	Explain the procedure for properly identifying patients.
07.07	Observe, report, and record changes in the patient's behavior as needed, including mental awareness.
07.08	Demonstrate adjustment of bed and side rails according to facility policy.
07.09	Demonstrate and assist the patient in dangling.
07.10	Explain and demonstrate proper body mechanics and ergonomics, and use assistive devices to safely transfer and support patients.
07.11	Demonstrate lifting, supporting, and transferring patients from bed to chair, bed to bed, and bed to stretcher, including the use of the various assistive devices and equipment while utilizing proper body mechanics and patient safety measures.
07.12	Demonstrate the proper use of a gait/transfer belt in transfer and ambulation.
07.13	Assist patient in ambulation, including the use of a crutch, cane, or walker.
07.14	Demonstrate the proper wheelchair safety techniques and assist the patient as needed with use.
07.15	Apply supportive devices as directed (e.g., footboard, over-bed cradle, alternating pressure mattress).
07.16	Assist patient with care and use of prosthetic/orthotic devices.
08.0	Apply the principles of infection control specific to the nurse assistant. The student will be able to:
08.01	Identify and implement transmission-based precautions and standard infection control procedures.
08.02	Recognize emerging diseases and disorders.
08.03	Explain medical and surgical asepsis.
08.04	Explain and demonstrate proper hand hygiene.

	08.05 Identify the chain of infection.
	08.06 Provide care for patients with infectious diseases while applying the principles of standard and transmission-based precautions.
	08.07 Apply the proper use of personal protective equipment (PPE) for all types of isolation, including donning and removing PPE appropriately.
	08.08 Describe how to correctly dispose of biohazardous materials according to appropriate government guidelines, such as OSHA.
	08.09 Follow isolation procedure with food trays, PPE, and other supplies/equipment.
	08.10 Collect a specimen from a patient in isolation.
09.0	Demonstrate knowledge of blood-borne diseases. The student will be able to:
	09.01 Describe blood-borne diseases.
	09.02 Distinguish between fact and fallacy about the transmission and treatment of diseases caused by blood-borne pathogens.
	09.03 Identify community resources and services available to individuals with diseases caused by blood-borne pathogens.
	09.04 Identify “at-risk” behaviors which promote the spread of diseases caused by blood-borne pathogens and the public education necessary to combat the spread of these diseases.
	09.05 Explain the legal aspects of HIV/AIDS, including testing.
10.0	Recognize and respond to emergency situations. The student will be able to:
	10.01 Describe emergency procedures utilized in the clinical area(s) and the role of the nursing assistant in these procedures.
	10.02 Recognize fire, safety, disaster, and evacuation procedures.
	10.03 Obtain and maintain training for certification on cardiopulmonary resuscitation (CPR), automated external defibrillator (AED), foreign body airway obstruction (FBAO), and first aid.
	10.04 Recognize adverse drug-related emergencies and take appropriate first aid action.
11.0	Perform supervised organizational functions following the patient care plan. The student will be able to:
	11.01 Organize and prioritize patient-care assignments.
	11.02 Complete assignments accurately and promptly.
12.0	Provide biological, psychological, and social support. The student will be able to:
	12.01 Discuss family roles and their significance to health.

	12.02 Respond to patient and family emotional needs.
13.0	Provide personal patient care. The student will be able to:
	13.01 Perform bed bath; observe and report changes in a patient, including skin and level of consciousness.
	13.02 Assist with shower or tub bath, including the use of specialty tubs or prepackaged disposable-bagged baths.
	13.03 Administer back rub with bath and as needed.
	13.04 Assist patient with hair care utilizing sink, tub, shower, bed, or shower cap.
	13.05 Demonstrate the use of a safety and/or electric razor to shave the patient.
	13.06 Demonstrate how to groom the patient, including hair, skin, foot, hand, and nail care.
	13.07 Assist with and/or administer oral hygiene, including denture care.
	13.08 Assist the patient to dress.
	13.09 Assist patient with toileting using various types of restorative and rehabilitative equipment.
	13.10 Assist patient with use of bedpan (standard and fracture).
	13.11 Assist with bowel and bladder training.
	13.12 Assist and/or provide perineal care.
	13.13 Empty, measure, and record urinary output and/or drainage.
	13.14 Demonstrate the application and use of a leg bag, leg strap, and dignity bag.
	13.15 Monitor and assist with the drainage of urostomy bags and colostomy bags.
	13.16 Assist patient with both donning and doffing prostheses and braces.
	13.17 Assist patient with meals.
	13.18 Describe the relationships of body systems when providing patient care.
14.0	Perform patient care procedures. The student will be able to:
	14.01 Demonstrate ability to accurately measure, record, and report vital signs.
	14.02 Demonstrate ability to recognize and report vital signs outside of normal parameters.

	14.03 Assist with the admission, transfer, and discharge of a patient and/or resident.
	14.04 Maintain patient belongings list.
	14.05 Make an unoccupied and occupied bed.
	14.06 Provide range-of-motion exercises, including, but not limited to, passive, active, and active-assisted.
	14.07 Apply anti-embolic hose and sequential compression devices.
	14.08 Understand and demonstrate proper collection of routine, timed urine, and clean-catch urine specimens.
	14.09 Record fluid intake and output (I&O).
	14.10 Observe, record, and report the patient's emesis.
	14.11 Monitor and provide urinary catheter care and drainage systems.
	14.12 Assist with ostomy care, including emptying or changing ostomy bags that do not adhere to the skin.
	14.13 Collect stool specimen.
	14.14 Assist with the collection of a sputum specimen.
	14.15 Assist the patient in applying binders.
	14.16 Care for the patient in skin and skeletal traction.
	14.17 Assist with pre-operative and post-operative patient care.
	14.18 Reinforce dressings under the supervision of the RN/LPN.
	14.19 Obtain and record an apical pulse.
	14.20 Provide cast care and/or pin care.
	14.21 Provide care for visual devices, including but not limited to eyeglasses, artificial eyes, and contact lenses.
	14.22 Provide care for hearing devices.
15.0	Apply principles of nutrition. The student will be able to:
	15.01 Identify nutrients and food groups.
	15.02 Identify and develop basic food plans.

	15.03 Check the patient's diet tray for accuracy.
	15.04 Monitor and document nutritional intake.
	15.05 Identify and implement regional, cultural, and religious food guidelines and preferences.
	15.06 Demonstrate knowledge of the need for thickened liquids and fluid consistency.
	15.07 Identify methods of maintaining fluid balance, including encouraging and restricting fluids.
	15.08 Explore and utilize the U.S. Department of Agriculture’s nutrition resources.
16.0	Provide care for geriatric patients. The student will be able to:
	16.01 Identify and assist with methods and procedures to maintain skin integrity, including but not limited to, preventing pressure ulcers.
	16.02 Identify and assist with methods to prevent falls in the elderly.
	16.03 Identify and assist with safety principles as related to the elderly.
	16.04 Describe general characteristics, particular needs, and age-related changes of the elderly.
	16.05 Identify attitudes and living habits that promote positive mental and physical health for the elderly.
	16.06 Distinguish between fact and fallacy about the aging process.
	16.07 Apply reality orientation techniques and validation therapy unless it is contraindicated by the patient's diagnosis.
	16.08 Recognize and respond appropriately to symptoms of common diseases, including dementia, depression, suicide, and Alzheimer’s.
	16.09 Provide and involve patients in diversional activities.
	16.10 Identify common alterations in elderly patient behavior.
	16.11 Provide care for patients with special needs, including but not limited to physical and cognitive impairments.
	16.12 Demonstrate awareness of common behaviors in drug use and abuse in the elderly.
	16.13 Report concerns to the nurse and appropriate authorities related to drug use and abuse in the elderly patient.
	16.14 Identify the need for community resources and services available to the elderly and their caregiver.
	16.15 Identify components of the grief process.
	16.16 Demonstrate an understanding of end-of-life care, hospice, and palliative care.

17.0	Assist with restorative (rehabilitative) activities. The student will be able to:
17.01	List the purposes of a restorative (rehabilitation) program.
17.02	Assist patient with specified restorative (rehabilitation) needs.
17.03	Assist patients to reach the optimum level of independence.
18.0	Demonstrate an understanding of information technology applications in healthcare. The student will be able to:
18.01	Define terms and demonstrate basic computer skills.
18.02	Recognize and/or describe technology applications in healthcare that are specific to the nursing assistant occupation.
18.03	Recognize new and emerging technology in healthcare.
19.0	Demonstrate employability skills. The student will be able to:
19.01	Identify personal traits or attitudes desirable in a nursing assistant.
19.02	Exemplify basic professional standards of a nursing assistant as they apply to hygiene, dress, language, confidentiality, and behavior, including but not limited to phone, email, and social media etiquette.
19.03	Identify documents that may be required when applying for a job.
19.04	Write an appropriate resume.
19.05	Conduct a job search.
19.06	Complete a job application form correctly.
19.07	Examine levels of education and credentialing requirements, including licensure and certification, employment opportunities, workplace environments, and career growth potential.
19.08	Identify acceptable work habits.
19.09	Recognize appropriate, effective, and professional behavior.
19.10	Compare careers within the health science career pathways.
19.11	

Course number: HCP0333
Occupational Completion Point: B
Accelerated Home Health Aide – 25 Hours

Students in this module have already completed a Nursing Assistant program. After completing this module, the student will have achieved the occupational completion point of a Home Health Aide (a home health aide who is also a nursing assistant). This program also meets the

requirements of a Home Health Aide as stated in Rules of the Department of Health and Rehabilitative Services, Division of Health, Chapter 10D-68 - Minimum Standards for Home Health Agencies.

Please refer to 42CFR§484 for the clinical and faculty requirements for the Home Health Aide course.

The recommended length of instruction for this module is 25 clock hours. Students who have completed the Nursing Assistant program should take this module to become a Home Health Aide.

20.0	Use verbal and written communications specific to the Home Health Aide. The student will be able to:
	20.01 Obtain data from the patient and family/significant others.
	20.02 Utilize verbal and written information to contribute to the patient's plan of care.
	20.03 Recognizes cultural differences in family.
21.0	Demonstrate legal and ethical responsibilities specific to a Home Health Aide. The student will be able to:
	21.01 Demonstrate legal and ethical behavior within the role and scope of home health aide responsibilities.
	21.02 Follow policies and procedures affecting the health, safety, and well-being of patients in the home setting.
22.0	Perform physical comfort and safety functions specific to the Home Health Aide. The student will be able to:
	22.01 Maintain a clean and safe home environment for the patient.
	22.02 Identify emergency evacuation procedures with adaptations to the home setting.
23.0	Apply principles of nutrition specific to the Home Health Aide. The student will be able to:
	23.01 List factors that must be considered when purchasing food.
	23.02 List factors that must be considered when storing food.
	23.03 Discuss the preparation and serving of trays in the home.
24.0	Apply the principles of infection control specific to the Home Health Aide. The student will be able to:
	24.01 Provide care for patients with infectious diseases in the home.
	24.02 Follow isolation procedures with food tray, garments, and other materials in the home.
	24.03 Utilize standard and blood-borne precautions in all home care.
25.0	Perform home health-care services. The student will be able to:

25.01	Follow an established work plan with the patient and family.
25.02	Perform patient-related cleaning tasks and laundry.
25.03	Identify methods for medication storage.
25.04	Assist patient with taking self-administered prescribed medication in the home and identify possible side effects and emergency procedures for adverse reactions in accordance with the Florida Statutes.
25.05	Demonstrate how to utilize specified equipment and supplies in the home.

Course Number: HCP0021
Occupational Completion Point: C
Patient Care Assistant – 45 Hours

Students enrolled in this module have previously completed a Nursing Assistant and Home Health Aide program and are adding these skills to work in a health care facility other than a nursing home. The average achieving student should complete this module in 45 clock hours. The occupational completion point Patient Care Assistant can only be achieved when this module is completed, plus the modules/or credentials for Nursing Assistant and Home Health Aide are satisfied.

26.0	Perform nursing assistant skills related to the hospital setting. The student will be able to:
26.01	Care for hospital equipment and supplies.
26.02	Transfer patient to stretcher and wheelchair.
26.03	Prepare hot and cold applications for the nurse to apply them.
26.04	Assist the patient to apply binders.
26.05	Care for the patient in skin and skeletal traction.
26.06	Assist with pre-operative and post-operative patient care.
26.07	Practice nursing assistant skills in the hospital setting.
27.0	Provide nursing assistant care for the adult patient. The student will be able to:
27.01	Assist with physical examination.
27.02	Care for patients receiving oxygen therapy.
27.03	Change an unsterile dressing.
27.04	Take an apical and pedal pulse.

27.05	Demonstrate an understanding of artificial eye and/or eyewear care.
27.06	Demonstrate an understanding and knowledge of the needs of patients with common health problems.
27.07	Measure pulse oximetry and report decreasing levels of O_2 saturation.

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as experimental, quality, and safety procedures, are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate, and troubleshoot equipment/tools used to make observations. Students understand measurement error and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

Special Notes

This program also meets the requirements of a Home Health Aide as stated in rules of the Department of health and rehabilitative services, division of health, chapter 10d-68 - minimum standards for home health agencies.

Please refer to 42CFR§484 for the clinical and faculty requirements for the Home Health Aide course.

This program meets the Department of Health's education requirements for HIV/AIDS, Domestic Violence and Prevention of Medical Errors. Although not a requirement for initial licensure, it is a requirement for renewal, therefore the instructor **may** provide a certificate for renewal purposes to the student verifying these requirements have been met.

If students in this program are seeking a licensure, certificate or registration through the Department of Health, please refer to 456.0635, F.S. for more information on disqualification for a license, certificate, or registration through the Department of Health.

Students who have completed the Health Science Core may articulate to this program. For teacher certification requirements for the remaining modules please check the certification diagram and/or the individual module.

Completion of this program should enable the postsecondary student to be given advanced standing in the Practical Nursing program H170607 as well as the ability to enter the Patient Care Technician program at OCP E.

The Core should be taken first in the program. Following the successful completion of the core, the student is eligible to take the National Health Care Foundation Skill Standards Assessment with instructor approval and the completion of a portfolio.

Career and Technical Student Organization (CTSO)

CTSOs are co-curricular career and technical student organizations providing leadership training and reinforcing specific career and technical skills. Career and Technical Student Organizations provide activities for students as an integral part of the instruction offered. Other CTSOs not listed in this curriculum framework or recognized by the Florida Department of Education are permissible provided they support student mastery over the standards and benchmarks of this curriculum framework.

Cooperative Training – OJT

On-the-job training is appropriate but not required for this program. Whenever offered, the rules, guidelines, and requirements specified in the OJT framework apply.

Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

Note: postsecondary curriculum and regulated secondary programs cannot be modified.

Florida Department of Education
Curriculum Framework

This program is a replacement for Patient Care Technician H170694 (0351390205).

Program Title: **Patient Care Technician**
Program Type: **Career Preparatory**
Career Cluster: **Health Science**

Career Certificate Program		
Program Number	H700600	
CIP Number	0351390208	
Grade Level	30, 31	
Program Length	600 hours	
Teacher Certification	Refer to the **Program Structure** section.	
CTSO	HOSA and SkillsUSA	
SOC Codes (all applicable)	For program SOC codes, please see the Program and Course Tables section of the CTE Program Resources page linked below.	
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml	
Basic Skills Level	Computation (Mathematics): 10	Communications (Reading and Language Arts): 10

Purpose

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Health Science career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of Health Science career cluster. This program is designed to prepare students for employment as patient care technicians and advanced cross-trained nursing assistants. This program offers a broad foundation of knowledge and skills, expanding the traditional role of the nursing assistant for both acute and long-term care settings.

The content includes but is not limited to broad, transferable skills and stresses understanding and demonstration of the following elements of the health care industry: planning, management, finance, technical and production skills, underlying principles of technology, labor issues, community issues, and health, safety, and environmental issues.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Program Structure

This program is a planned sequence of instruction consisting of 6 occupational completion points.

This program is comprised of courses which have been assigned course numbers in the SCNS (Statewide Course Numbering System) in accordance with Section 1007.24 (1), F.S. Career and Technical credit shall be awarded to the student on a transcript in accordance with Section 1001.44(3) (b), F.S.

To teach the courses listed below, instructors must hold at least one of the teacher certifications indicated for that course.

The following table illustrates the postsecondary program structure:

OCP	Course Number	Course Title	Teacher Certification	Length
A	HCP0124	Nurse Assistant	REG NURSE 7 G PRAC NURSE @7 %7%G (Must be a Registered Nurse)	165 hours
B	HCP0333	Accelerated Home Health Aide	REG NURSE 7 G PRAC NURSE @7 %7%G (Must be a Registered Nurse)	25 hours
C	HCP0021	Patient Care Assistant		45 hours
D	HSC0012	Allied Health Assistant		100 hours
E	MEA0585	Advanced Allied Health Assistant		200 hours
F	PRN0095	Patient Care Technician		65 hours

**** The LPN 7 G district issued certification is a practical nurse. A practical nurse can only be utilized as an instructor of the CNA training program when they are supervised by the program coordinator who must be a registered nurse. Please refer to 64B9-15.005, F.A.C., for requirements.***

Florida's Career Readiness Skills for CTE Programs

Employability Skills	
01.0	Apply academic skills to workplace scenarios.
01.01	Use reading skills.
01.02	Use writing skills.
01.03	Use mathematical strategies and procedures.
01.04	Use scientific principles and procedures.
02.0	Design a solution to an industry problem.
02.01	Use critical thinking.
02.02	Use creativity.
02.03	Make sound decisions.
02.04	Solve problems.
02.05	Reason.
02.06	Plan and organize.
03.0	Manage resources within an industry project
03.01	Manage time.
03.02	Manage money or resources.
03.03	Manage materials.
03.04	Manage personnel.
04.0	Oversee the subcomponents, operations and output of a technical or organizational system.
04.01	Manage systems.
04.02	Monitor systems.
04.03	Improve systems.
05.0	Use information for decision making.
05.01	Locate information.
05.02	Organize information.
05.03	Use information.

	05.04 Analyze information.
	05.05 Communicate information.
06.0	Apply relevant technology to workplace scenarios to aid productivity.
	06.01 Use technology.
07.0	Interpret and express interpersonal communication.
	07.01 Communicate verbally.
	07.02 Listen actively.
	07.03 Comprehend written material.
	07.04 Convey information in writing.
	07.05 Communicate nonverbally.
	07.06 Interpret nonverbal communication.
08.0	Interact with others to accomplish workplace goals.
	08.01 Collaborate with others in a team.
	08.02 Respond to customer needs.
	08.03 Exercise leadership.
	08.04 Negotiate to resolve conflict.
	08.05 Respect others.
09.0	Manage personal behavior to maximize productivity and professional growth.
	09.01 Demonstrate responsibility and self-discipline.
	09.02 Adapt and show flexibility.
	09.03 Work independently.
	09.04 Demonstrate a willingness to learn.
	09.05 Demonstrate integrity.
	09.06 Demonstrate professionalism.
	09.07 Take initiative.
	09.08 Display positive attitude.
	09.09 Take responsibility for professional growth.

Job Attainment	
10.0	Find, assess and apply to job opportunities.
10.01	Identify online job posts relevant to his or her career aspirations.
10.02	Compare and contrast the job posts' required qualifications, job duties, compensation, benefits and employers.
10.03	Define what information, documentation and writing prompts are required for the positions.
11.0	Communicate personal competence, character and fit for a job opportunity.
11.01	Develop a resume.
11.02	Write a cover letter.
11.03	Curate a professional portfolio that includes work products.
11.04	Prepare for and experience a mock job interview.
12.0	Cultivate and leverage relationships to professionally advance.
12.01	Request a signed reference letter, letter of recommendation and/or an online skill/professionalism endorsement.
12.02	Develop a plan to cultivate a professional digital footprint.
12.03	Develop a networking plan for a specific industry of interest.

Standards

After successfully completing this program, the student will be able to perform the following:

01.0 Demonstrate knowledge of the healthcare delivery system and health occupations.
02.0 Use verbal, written, and/or electronic communications specific to the nurse assistant.
03.0 Demonstrate legal and ethical responsibilities specific to the nurse assistant.
04.0 Apply basic math and science skills specific to the nurse assistant.
05.0 Describe the anatomy and physiology of the human body.
06.0 Demonstrate an understanding of and apply wellness and disease concepts.
07.0 Perform physical comfort and safety functions specific to the nurse assistant.
08.0 Apply the principles of infection control specific to the nurse assistant.
09.0 Demonstrate knowledge of blood-borne diseases.
10.0 Recognize and respond to emergency situations.
11.0 Perform supervised organizational functions following the patient care plan.
12.0 Provide biological, psychological, and social support.
13.0 Provide personal patient care.
14.0 Perform patient care procedures.
15.0 Apply principles of nutrition.
16.0 Provide care for geriatric patients.
17.0 Assist with restorative (rehabilitative) activities.
18.0 Demonstrate an understanding of information technology applications in healthcare.
19.0 Demonstrate employability skills.
20.0 Use verbal and written communications specific to the Home Health Aide.
21.0 Demonstrate legal and ethical responsibilities specific to the Home Health Aide.
22.0 Perform physical comfort and safety functions specific to the Home Health Aide.
23.0 Apply principles of nutrition specific to the Home Health Aide.
24.0 Apply the principles of infection control specific to the Home Health Aide.
25.0 Perform home health-care services.
26.0 Perform nursing assistant skills related to the hospital setting.
27.0 Provide nursing assistant care for the adult patient.
28.0 Perform skills representative of 1-3 major allied health areas as determined by local labor market demand.
29.0 Complete a clinical rotation in the selected major allied health areas.
30.0 Perform additional skills from the previous module at the aide level and do not go beyond the scope of practice of unlicensed assistive personnel.
31.0 Complete a clinical rotation in the selected major allied health areas.
32.0 Demonstrate knowledge of organizational and effective team member skills.
33.0 Practice organizational and effective team member skills in a clinical setting.

Florida Department of Education
Student Performance Standards

Program Title: **Patient Care Technician**
Career Certificate Program Number: **H700600**

Course Number: HCP0124 **Occupational Completion Point: A** **Nursing Assistant – 165 Hours**	
The following intended outcomes 1-19 should be taught together as a module to achieve the occupational completion point Nursing Assistant.	
01.0	Demonstrate knowledge of the healthcare delivery system and health occupations. The student will be able to:
01.01	Identify the basic components of the healthcare delivery system, including public, private, government, and non-profit.
01.02	Describe the various types of healthcare providers and the range of services available, including resources to victims of domestic violence.
01.03	Describe the composition and functions of a healthcare team.
01.04	Identify the general roles and responsibilities of the individual members of the healthcare team.
01.05	Identify characteristics of effective teams.
01.06	Recognize methods for building positive team relationships.
01.07	Discuss attributes and attitudes of an effective leader.
01.08	Recognize factors and situations that may lead to conflict.
01.09	Recognize effective techniques for managing team conflict.
02.0	Use verbal, written, and/or electronic communications specific to the nurse assistant. The student will be able to:
02.01	Develop basic speaking and active listening skills.
02.02	Identify successful and unsuccessful communication characteristics, including communication styles and barriers.
02.03	Identify characteristics of verbal and non-verbal cues.
02.04	Describe the purpose of the chain of communication to resolve conflict.
02.05	Use appropriate medical terminology and abbreviations.

	02.06 Obtain specified data from the patient and family.
	02.07 Utilize verbal and written information to assist with the patient's plan of care.
	02.08 Distinguish between and report subjective and objective information.
	02.09 Discuss the importance of patient/client education regarding healthcare.
	02.10 Adapt communication skills to varied levels of understanding and cultural orientation, including, but not limited to, diverse age, cultural, economic, ethnic, and religious groups.
	02.11 Demonstrate the use of the communication systems, including electronic health record systems.
03.0	Demonstrate legal and ethical responsibilities specific to the nurse assistant. The student will be able to:
	03.01 Discuss and demonstrate legal and ethical behavior within the nursing assistant's scope of practice, including, but not limited to, role limitations in Florida.
	03.02 Describe a code of ethics consistent with the nursing assistant occupation.
	03.03 Explain the laws governing harassment, labor, and employment.
	03.04 Follow policies and procedures affecting the health, safety, and well-being of patients.
	03.05 Demonstrate safe standards of patient care, including prevention and quality of care.
	03.06 Exhibit behavior supporting and promoting patients’ and/or residents' rights.
	03.07 Describe advance directives.
	03.08 Explain the procedures for accurate documentation and record keeping.
	03.09 Recognize the potential for and prevention of medical errors and practice the proper procedures to follow regarding medical errors.
	03.10 Follow policies and procedures affecting the health, safety, and well-being of patients.
	03.11 Recognize and report signs of substance abuse.
	03.12 Demonstrate the understanding of vulnerable population abuse and reporting procedures per agency.
	03.13 Recognize and report illegal and/or unethical practices of healthcare workers.
	03.14 Recognize and report abuse, including domestic violence, neglect, and suspected human trafficking.
	03.15 Recognize that a CNA must self-report any crimes they’ve been involved in within 30 days of the offense in accordance with Florida Statutes.
	03.16 Explain practices that could result in malpractice, liability, negligence, abandonment, false imprisonment, and fraud.

	03.17 Define Omnibus Budget Reconciliation Act (OBRA).
	03.18 Define Minimum Data Set (MDS).
	03.19 Identify and explain the standards of the Health Insurance Portability and Accountability Act (HIPAA).
04.0	Apply basic math and science skills specific to the nurse assistant. The student will be able to:
	04.01 Demonstrate knowledge of Celsius and Fahrenheit temperature and the conversion of each.
	04.02 Calculate ratios.
	04.03 Make, use, and convert data using traditional and metric units.
	04.04 Make estimations and approximations; then judge the reasonableness of the results and demonstrate the ability to evaluate and draw conclusions.
	04.05 Convert from regular time to 24-hour time.
	04.06 Organize and communicate results obtained by observation.
05.0	Describe the anatomy and physiology of the human body. The student will be able to:
	05.01 Describe the basic structure and function of the human body.
	05.02 Describe the relationships of body systems in providing patient care.
	05.03 Recognize abnormal signs and symptoms of common diseases and conditions.
06.0	Demonstrate an understanding of and apply wellness and disease concepts. The student will be able to:
	06.01 Describe strategies for the prevention of diseases, including health screenings and examinations.
	06.02 Identify personal health practices and environmental factors that affect the optimal function of each of the major body systems.
	06.03 Identify psychological reactions to illnesses, including defense mechanisms.
	06.04 Identify complementary and alternative health practices.
	06.05 Discuss the adverse effects of the use of alcohol, tobacco, and both legal and illegal drugs on the human body and apply safety practices related to these and other high-risk behaviors.
	06.06 Explain the basic concepts of positive self-image, wellness, and stress.
	06.07 Develop a wellness and stress control plan that can be used in personal and professional life.

07.0	Perform physical comfort and safety functions specific to the nurse assistant. The student will be able to:
07.01	Implement appropriate regulatory and accrediting agency patient safety guidelines, including Joint Commission.
07.02	Explain personal safety procedures based on Occupational Safety and Health Administration (OSHA) and the Centers for Disease Control (CDC) regulations, including standard precautions.
07.03	Recognize Safety Data Sheets and comply with safety signs, symbols, and labels.
07.04	Maintain safe patient units, equipment, and a comfortable environment.
07.05	Maintain service areas on the units, including supplies and equipment.
07.06	Explain the procedure for properly identifying patients.
07.07	Observe, report, and record changes in the patient's behavior as needed, including mental awareness.
07.08	Demonstrate adjustment of bed and side rails according to facility policy.
07.09	Demonstrate and assist the patient in dangling.
07.10	Explain and demonstrate proper body mechanics and ergonomics, and use assistive devices to safely transfer and support patients.
07.11	Demonstrate lifting, supporting, and transferring patients from bed to chair, bed to bed, and bed to stretcher, including the use of the various assistive devices and equipment while utilizing proper body mechanics and patient safety measures.
07.12	Demonstrate the proper use of a gait/transfer belt in transfer and ambulation.
07.13	Assist patient in ambulation, including the use of a crutch, cane, or walker.
07.14	Demonstrate the proper wheelchair safety techniques and assist the patient as needed with use.
07.15	Apply supportive devices as directed (e.g., footboard, over-bed cradle, alternating pressure mattress).
07.16	Assist patient with care and use of prosthetic/orthotic devices.
08.0	Apply the principles of infection control specific to the nurse assistant. The student will be able to:
08.01	Identify and implement transmission-based precautions and standard infection control procedures.
08.02	Recognize emerging diseases and disorders.
08.03	Explain medical and surgical asepsis.
08.04	Explain and demonstrate proper hand hygiene.

	08.05 Identify the chain of infection.
	08.06 Provide care for patients with infectious diseases while applying the principles of standard and transmission-based precautions.
	08.07 Apply the proper use of personal protective equipment (PPE) for all types of isolation, including donning and removing PPE appropriately.
	08.08 Describe how to correctly dispose of biohazardous materials according to appropriate government guidelines, such as OSHA.
	08.09 Follow isolation procedure with food trays, PPE, and other supplies/equipment.
	08.10 Collect a specimen from a patient in isolation.
09.0	Demonstrate knowledge of blood-borne diseases. The student will be able to:
	09.01 Describe blood-borne diseases.
	09.02 Distinguish between fact and fallacy about the transmission and treatment of diseases caused by blood-borne pathogens.
	09.03 Identify community resources and services available to individuals with diseases caused by blood-borne pathogens.
	09.04 Identify “at-risk” behaviors which promote the spread of diseases caused by blood-borne pathogens and the public education necessary to combat the spread of these diseases.
	09.05 Explain the legal aspects of HIV/AIDS, including testing.
10.0	Recognize and respond to emergency situations. The student will be able to:
	10.01 Describe emergency procedures utilized in the clinical area(s) and the role of the nursing assistant in these procedures.
	10.02 Recognize fire, safety, disaster, and evacuation procedures.
	10.03 Obtain and maintain training for certification on cardiopulmonary resuscitation (CPR), automated external defibrillator (AED), foreign body airway obstruction (FBAO), and first aid.
	10.04 Recognize adverse drug-related emergencies and take appropriate first aid action.
11.0	Perform supervised organizational functions following the patient care plan. The student will be able to:
	11.01 Organize and prioritize patient-care assignments.
	11.02 Complete assignments accurately and promptly.
12.0	Provide biological, psychological, and social support. The student will be able to:
	12.01 Discuss family roles and their significance to health.

	12.02 Respond to patient and family emotional needs.
13.0	Provide personal patient care. The student will be able to:
	13.01 Perform bed bath; observe and report changes in a patient, including skin and level of consciousness.
	13.02 Assist with shower or tub bath, including the use of specialty tubs or prepackaged disposable-bagged baths.
	13.03 Administer back rub with bath and as needed.
	13.04 Assist patient with hair care utilizing sink, tub, shower, bed, or shower cap.
	13.05 Demonstrate the use of a safety and/or electric razor to shave the patient.
	13.06 Demonstrate how to groom the patient, including hair, skin, foot, hand, and nail care.
	13.07 Assist with and/or administer oral hygiene, including denture care.
	13.08 Assist the patient to dress.
	13.09 Assist patient with toileting using various types of restorative and rehabilitative equipment.
	13.10 Assist patient with use of bedpan (standard and fracture).
	13.11 Assist with bowel and bladder training.
	13.12 Assist and/or provide perineal care.
	13.13 Empty, measure, and record urinary output and/or drainage.
	13.14 Demonstrate the application and use of a leg bag, leg strap, and dignity bag.
	13.15 Monitor and assist with the drainage of urostomy bags and colostomy bags.
	13.16 Assist patient with both donning and doffing prostheses and braces.
	13.17 Assist patient with meals.
	13.18 Describe the relationships of body systems when providing patient care.
14.0	Perform patient care procedures. The student will be able to:
	14.01 Demonstrate ability to accurately measure, record, and report vital signs.
	14.02 Demonstrate ability to recognize and report vital signs outside of normal parameters.

14.03	Assist with the admission, transfer, and discharge of a patient and/or resident.
14.04	Maintain the patient belongings list
14.05	Make an unoccupied and occupied bed.
14.06	Provide range-of-motion exercises, including, but not limited to, passive, active, and active-assisted.
14.07	Apply anti-embolic hose and sequential compression devices.
14.08	Understand and demonstrate proper collection of routine, timed urine, and clean-catch urine specimens.
14.09	Record fluid intake and output (I&O).
14.10	Observe, record, and report the patient's emesis.
14.11	Monitor and provide urinary catheter care and drainage systems.
14.12	Assist with ostomy care, including emptying or changing ostomy bags that do not adhere to the skin.
14.13	Collect stool specimen.
14.14	Assist with the collection of a sputum specimen.
14.15	Assist the patient in applying binders.
14.16	Care for the patient in skin and skeletal traction.
14.17	Assist with pre-operative and post-operative patient care.
14.18	Reinforce dressings under the supervision of the RN/LPN.
14.19	Obtain and record an apical pulse.
14.20	Provide cast care and/or pin care.
14.21	Provide care for visual devices, including but not limited to eyeglasses, artificial eyes, and contact lenses.
14.22	Provide care for hearing devices.
15.0	Apply principles of nutrition. The student will be able to:
15.01	Identify nutrients and food groups.
15.02	Identify and develop basic food plans.

15.03	Check the patient's diet tray for accuracy.
15.04	Monitor and document nutritional intake.
15.05	Identify and implement regional, cultural, and religious food guidelines and preferences.
15.06	Demonstrate knowledge of the need for thickened liquids and fluid consistency.
15.07	Identify methods of maintaining fluid balance, including encouraging and restricting fluids.
15.08	Explore and utilize the U.S. Department of Agriculture’s nutrition resources.
16.0	Provide care for geriatric patients. The student will be able to:
16.01	Identify and assist with methods and procedures to maintain skin integrity, including but not limited to, preventing pressure ulcers.
16.02	Identify and assist with methods to prevent falls in the elderly.
16.03	Identify and assist with safety principles as related to the elderly.
16.04	Describe general characteristics, particular needs, and age-related changes of the elderly.
16.05	Identify attitudes and living habits that promote positive mental and physical health for the elderly.
16.06	Distinguish between fact and fallacy about the aging process.
16.07	Apply reality orientation techniques and validation therapy unless it is contraindicated by the patient's diagnosis.
16.08	Recognize and respond appropriately to symptoms of common diseases, including dementia, depression, suicide, and Alzheimer’s.
16.09	Provide and involve patients in diversional activities.
16.10	Identify common alterations in elderly patient behavior.
16.11	Provide care for patients with special needs, including but not limited to physical and cognitive impairments.
16.12	Demonstrate awareness of common behaviors in drug use and abuse in the elderly.
16.13	Report concerns to the nurse and appropriate authorities related to drug use and abuse in the elderly patient.
16.14	Identify the need for community resources and services available to the elderly and their caregiver.
16.15	Identify components of the grief process.
16.16	Demonstrate an understanding of end-of-life care, hospice, and palliative care.

17.0	Assist with restorative (rehabilitative) activities. The student will be able to:
17.01	List the purposes of a restorative (rehabilitation) program.
17.02	Assist patient with specified restorative (rehabilitation) needs.
17.03	Assist patients to reach the optimum level of independence.
18.0	Demonstrate an understanding of information technology applications in healthcare. The student will be able to:
18.01	Define terms and demonstrate basic computer skills.
18.02	Recognize and/or describe technology applications in healthcare that are specific to the nursing assistant occupation.
18.03	Recognize new and emerging technology in healthcare.
19.0	Demonstrate employability skills. The student will be able to:
19.01	Identify personal traits or attitudes desirable in a nursing assistant.
19.02	Exemplify basic professional standards of a nursing assistant as they apply to hygiene, dress, language, confidentiality, and behavior, including but not limited to phone, email, and social media etiquette.
19.03	Identify documents that may be required when applying for a job.
19.04	Write an appropriate resume.
19.05	Conduct a job search.
19.06	Complete a job application form correctly.
19.07	Examine levels of education and credentialing requirements, including licensure and certification, employment opportunities, workplace environments, and career growth potential.
19.08	Identify acceptable work habits.
19.09	Recognize appropriate, effective, and professional behavior.
19.10	Compare careers within the health science career pathways.

Course Number: HCP0333
Occupational Completion Point: B
Accelerated Home Health Aide – 25 hours

Students in this module have already completed a Nursing Assistant program. After completing this module, the student will have achieved the occupational completion point of a Home Health Aide (a home health aide who is also a nursing assistant). This program also meets the

requirements of a Home Health Aide as stated in Rules of the Department of Health and Rehabilitative Services, Division of Health, Chapter 10D-68 - Minimum Standards for Home Health Agencies.

Please refer to 42CFR§484 for the clinical and faculty requirements for the Home Health Aide course.

The recommended length of instruction for this module is 25 clock hours, but no less than 20 hours. Students who have completed the Nursing Assistant program should take this module to become a Home Health Aide.

20.0	Use verbal and written communications specific to the Home Health Aide. The student will be able to:
	20.01 Obtain data from the patient and family/significant others.
	20.02 Utilize verbal and written information to contribute to the patient's plan of care.
	20.03 Recognizes cultural differences in family.
21.0	Demonstrate legal and ethical responsibilities specific to the Home Health Aide. The student will be able to:
	21.01 Demonstrate legal and ethical behavior within the role and scope of home health aide responsibilities.
	21.02 Follow policies and procedures affecting the health, safety, and well-being of patients in the home setting.
22.0	Perform physical comfort and safety functions specific to the Home Health Aide. The student will be able to:
	22.01 Maintain a clean and safe home environment for the patient.
	22.02 Identify emergency evacuation procedures with adaptations to the home setting.
23.0	Apply principles of nutrition specific to the Home Health Aide. The student will be able to:
	23.01 List factors that must be considered when purchasing food.
	23.02 List factors that must be considered when storing food.
	23.03 Discuss the preparation and serving of trays in the home.
24.0	Apply the principles of infection control specific to the Home Health Aide. The student will be able to:
	24.01 Provide care for patients with infectious diseases in the home.
	24.02 Follow isolation procedures with food tray, garments, and other materials in the home.
	24.03 Utilize standard and blood-borne precautions in all home care.
25.0	Perform home health-care services. The student will be able to:

25.01	Follow an established work plan with the patient and family.
25.02	Perform patient-related cleaning tasks and laundry.
25.03	Identify methods for medication storage.
25.04	Assist patient with taking self-administered prescribed medication in the home and identify possible side effects and emergency procedures for adverse reactions in accordance with the Florida Statutes.
25.05	Demonstrate how to utilize specified equipment and supplies in the home.

Course Number: HCP0021
Occupational Completion Point: C
Patient Care Assistant – 45 Hours

Students enrolled in this module have previously completed a Nursing Assistant and Home Health Aide program and are adding these skills to work in a health care facility other than a nursing home. The average achieving student should complete this module in 40 clock hours with a minimum of 20 clinical hours. The occupational completion point for Patient Care Assistant can only be achieved when this module is completed, plus the modules/or credentials for Home Health Aide and Nursing Assistant are satisfied.

26.0	Perform nursing assistant skills related to the hospital setting. The student will be able to:
26.01	Care for hospital equipment and supplies.
26.02	Transfer patient to a stretcher and wheelchair.
26.03	Prepare hot and cold applications for a nurse to apply them.
26.04	Assist the patient to apply binders.
26.05	Care for the patient in skin and skeletal traction.
26.06	Assist with pre-operative and post-operative patient care.
26.07	Practice nursing assistant skills in the hospital setting.
27.0	Provide nursing assistant care for the adult patient. The student will be able to:
27.01	Assist with a physical examination.
27.02	Care for patients receiving oxygen therapy.
27.03	Change an unsterile dressing.
27.04	Take an apical and pedal pulse.

27.05	Demonstrate an understanding of artificial eye and/or eyewear care.
27.06	Demonstrate an understanding and knowledge of the needs of patients with common health problems.
27.07	Measure pulse oximetry and report decreasing levels of O_2 saturation.

Course Number: HSC0012
Occupational Completion Point: D
Allied Health Assistant – 100 Hours

Students enrolled in this module have completed the Patient Care Assistant competencies and/or are adding these skills to be multi-skilled workers. Students will perform skills representative of one to three areas of allied health care in the laboratory and clinical settings. Major areas of allied health are defined as physical therapy, emergency, radiation, laboratory and respiratory medicine, and occupational therapy. Other areas of health, medicine, dentistry, or veterinary may be included with instructor-provided competencies**. Such teacher-made competencies must remain at the aide level and not go beyond the scope of practice of unlicensed assistive personnel. Invasive procedures that fall into the nursing scope of practice are not to be added**. Clinical experience is defined as activities performed in the clinical setting under the supervision of the appropriate health professional. School certificates for this module must be for "Allied Health Assistant". Specific competencies should be listed on the back of the certificate.

28.0	Perform skills representative of 1 to 3 major allied health areas as determined by labor market demand. The student will be able to:
28.01	Perform skills related to the body systems.
28.02	If unlicensed physical restorative type skills are to be taught, students will be able to:
	• Describe the functions of bones and muscles as related to the practice of physical therapy.
	• Define disability and identify types of disabilities.
	• Describe equipment used in physical therapy.
	• Teach crutch and walker use and care.
	• Perform safe body mechanics and transfer techniques.
	• Demonstrate an understanding of the use of modalities and practice of physical therapy (i.e., Ultrasound, heat and cold therapeutic massage, E-STEM, wound care, elastic stockings).
	• Perform communication skills specifically related to physical therapy.
	• Assist clients in eating using prompting techniques in the use of adaptive feeding devices.
	• Identify augmented communication devices and describe the purpose of each.

• Demonstrate techniques used in active and passive range of motion exercises.
• Instruct patients in bed/wheelchair mobility activities.
• Describe the relationship between long-term and short-term goals.
28.03 If unlicensed occupational restorative type skills are to be taught, students will be able to:
• Describe, name, and discuss the avenues of occupational therapy practice and the equipment used.
• Perform feeding and dressing skills using one hand and/or adaptive equipment.
• Perform communication skills specifically related to occupational therapy.
• Perform and instruct a range of motion exercises.
• Train the client in clothing care skills.
• Train the client in food preparation skills.
• Demonstrate an understanding of assisting the client in money management skills.
28.04 If unlicensed respiratory restorative type skills are to be taught, students will be able to:
• Name and discuss the avenues of Respiratory Care Practice.
• Describe common respiratory diseases (asthma, emphysema, chronic bronchitis, and atelectasis) and common medications used to treat respiratory diseases.
• Assemble and practice using gas-reducing and flow-regulating equipment.
• Demonstrate and discuss the use of incentive spirometers.
• Differentiate between various oxygen-delivery devices (nasal cannulas, simple and rebreathing masks, oxyhoods, enclosures.
• Stock shelves, process, and perform preventative maintenance on respiratory care equipment.
• Check emergency equipment assigned to respiratory care.
• Demonstrate/discuss the use of postural drainage and percussion.
• Discuss and practice the use of the pulse oximeter.
• Describe the equipment and use of humidity/aerosol.
28.05 If medical administrative assisting type skills are one of the selected allied health areas to be taught, students will:

	• Demonstrate an understanding of basic medical terminology, e.g., prefixes, suffixes, and root words related to major body systems.
	• Demonstrate an understanding of straight numerical, alphabetical, and terminal digit filing.
	• Demonstrate computer literacy, keyboarding, and retrieval skills.
	• List procedures for scheduling and referring patients, and handling walk-in emergency patients.
	• Understand what is required to create and submit a medical bill.
	• Define a Release of Medical Information, Explanation of Benefit, Assignment of Benefit, and Electronic Remittance Advice
	• Develop an understanding of the term HMO and be able to interpret the information contained on the patient's insurance card.
	• Understand the financial terms and procedures involved in operating a medical office practice, including Income, Expense, Accounts Receivable, Accounts Payable, Cash, and Accrual Accounting, Write-off Adjustments.
28.06	If unlicensed radiologic type skills are to be taught, students will:
	• Identify the function of a cassette, film, and screen.
	• Describe how radiation produces an image on film.
	• Identify the process by which X-ray film is developed.
	• Process a film through an automatic processor.
	• Identify anatomical position and terminology related to position (supine, prone, proximal, distal, medial, lateral, superior, inferior, anterior/ventral, oblique, and posterior/dorsal).
	• Identify patient properly (check identification band, etc.).
	• Explain appropriate exam(s) to the patient.
	• Perform safe body mechanics and transfer of the patient onto the x-ray table.
	• Position patient for exam(s) (chest, KUB, hand, and foot).
	• Position the x-ray tube to simulate exposure for exam(s) (chest, KUB, hand, and foot).
	• Use an artificial arm to perform venipuncture.
28.07	If unlicensed electrocardiograph aide type skills are to be taught, students will:
	• Describe the cardiovascular system.

	• Demonstrate knowledge of, apply, and use medical instrumentation modalities.
	• Demonstrate knowledge of the use of electrocardiographic equipment on patients who have special needs and considerations.
	• Perform patient care techniques in the health care facility.
	• Demonstrate knowledge of telemetry application,
	• Assist with the patient care of patients undergoing ambulatory monitoring and stress testing.
	• Demonstrate knowledge of patient care for patients with pacemakers and implanted defibrillators.
	• Identify legal and ethical responsibilities of an EKG/ECG monitor technician.
	• Recognize normal and abnormal monitoring.
28.08	If unlicensed phlebotomy aide type skills are to be taught, students will:
	• Demonstrate accepted professional communication and interpersonal skills of a phlebotomist.
	• Discuss phlebotomy in relation to the health care setting.
	• Identify the anatomic structure and function of body systems in relation to services performed by phlebotomist.
	• Recognize and identify collection reagents, supplies, equipment and interfering chemical substances.
	• Demonstrate skills and knowledge necessary to perform phlebotomy.
	• Practice accepted procedures of transporting, accessioning and processing specimens.
	• Practice quality assurance and safety.
28.09	If unlicensed geriatric type skills are to be taught, (for students completing nurse assisting only) students will:
	• Recognize types of long-term care facilities and levels of care.
	• Be familiar with legislation affecting long-term care.
	• Discuss physical and emotional effects of aging and appropriate ways of dealing with them.
	• Recognize the stages of dementia and the care of residents in each stage.
	• Discuss reality orientation, reminiscing, and validation therapy.
	• Describe the effects of aging on nutritional needs.

	• Provide for the safety of the elderly and chronically ill patient, including prevention of falls, prevention of infections, provision of a safe environment and prompt attendance to patients' needs.
	• Check the integrity of the patient's skin condition and take appropriate actions when needed.
	• Recognize common chronic illnesses and the special care required.
	• Provide appropriate end-of-life care.
	• Know common medications taken by the elderly and chronically ill, their effects, and side effects.
29.0	Complete a clinical rotation in 1-3 major allied health areas. The student will be able to:
29.01	Demonstrate skills in the selected major allied health areas in the clinical setting
29.02	Complete clinical rotations under the supervision of a duly licensed/certified allied health care or nursing professional.
29.03	Exhibit behavior consistent with the professional ethics required of each of the allied health areas being studied.

Course Number: MEA0585
Occupational Completion Point: E
Advanced Allied Health Assistant – 200 Hours

Students enrolled in this module have completed the Patient Care Assistant and Allied Health Assistant competencies, and/or are adding these skills to be more multi-skilled workers. Students will perform skills representative of one to three areas of allied health care in the laboratory and clinical settings. Major areas of allied health are defined as physical therapy, emergency, radiation, laboratory and respiratory medicine, and occupational therapy. Other areas of health, medicine, dentistry, or veterinary may be included with instructor-provided competencies**. Such teacher-made competencies must remain at the aide level and not go beyond the scope of practice of unlicensed assistive personnel. Invasive procedures that fall into the nursing scope of practice are not to be added**. Clinical experience is defined as activities performed in the clinical setting under the supervision of the appropriate health professional. School certificates for this module must be for "Advanced Allied Health Assistant". Specific competencies should be listed on the back of the certificate.

30.0	Perform additional skills from the previous module at the aide level and do not go beyond the scope of practice of unlicensed assistive personnel.
31.0	Complete a clinical rotation in the selected major allied health area. The student will be able to:
31.01	Demonstrate skills in the selected major allied health areas in the clinical setting.
31.02	Complete clinical rotations under the supervision of a duly licensed/certified allied health care or nursing professional.
31.03	Exhibit behavior consistent with the professional ethics required of each of the allied health areas being studied.

Course Number: PRN0095 **Occupational Completion Point: F** **Patient Care Technician – 65 Hours**	
Students enrolled in this module MUST have completed ALL modules in this program. Upon completion, they will be prepared as the cross-trained unlicensed worker known as the Patient Care Technician (Industry Title).	
32.0	Demonstrate knowledge of organizational and effective team member skills. The student will be able to:
	32.01 Define terms associated with organizational and time management skills.
	32.02 Discuss various situations when a Patient Care Technician would utilize organizational skills.
	32.03 List the characteristics of an effective team member.
	32.04 Discuss the chain of command and characteristics of team member relationships.
	32.05 Perform a self-evaluation.
33.0	Practice organizational and effective team member skills in a clinical setting. The student will be able to:
	33.01 Demonstrate ways to deal with conflict.
	33.02 Demonstrate employability skills specific to a patient care technician.
	33.03 Demonstrate communication skills that are supportive of team members.
	33.04 Demonstrate effective time management skills.
	33.05 Give and receive end-of-shift reports to team members.

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as, experimental, quality, and safety procedures are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate and troubleshoot equipment/tools used to make observations. Students understand measurement error; and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

Special Notes

This program also meets the requirements of Home Health Aide as stated in Rules of the Department of Health and Rehabilitative services, Division of Health, Chapter 10D-68 - Minimum Standards for Home Health Agencies.

Please refer to 42CFR§484 for the clinical and faculty requirements for the Home Health Aide course.

This program meets the Department of Health's education requirements for HIV/AIDS, Domestic Violence and Prevention of Medical Errors. Although not a requirement for initial licensure, it is a requirement for renewal, therefore the instructor **may** provide a certificate for renewal purposes to the student verifying these requirements have been met.

If students in this program are seeking a licensure, certificate or registration through the Department of Health, please refer to 456.0635, F.S. for more information on disqualification for a license, certificate, or registration through the Department of Health.

A voluntary Certified Patient Care Technician (CPCT) national Examination is available through the:

National Healthcare Association http://www.nhanow.com/
7500 West 160th Street, Stilwell, Kansas 66085
Phone: 973-605-1881, Toll Free: (800) 499-9092, FAX: (913) 661-6291

Completion of this program should enable the postsecondary student to be given advanced standing in the Practical Nursing program H170607.

The Core should be taken first in the program. Following the successful completion of the core, the student is eligible to take the National Health Care Foundation Skill Standards Assessment with instructor approval and the completion of a portfolio.

Career and Technical Student Organization (CTSO)

CTSOs are co-curricular career and technical student organizations providing leadership training and reinforcing specific career and technical skills. Career and Technical Student Organizations provide activities for students as an integral part of the instruction offered. Other CTSOs not listed in

this curriculum framework or recognized by the Florida Department of Education are permissible provided they support student mastery over the standards and benchmarks of this curriculum framework.

Cooperative Training – OJT

On-the-job training is appropriate but not required for this program. Whenever offered, the rules, guidelines, and requirements specified in the OJT framework apply.

Basic Skills

In Career Certificate programs offered for 450 hours or more, in accordance with Rule 6A-10.040, F.A.C., the minimum basic skills grade levels required for postsecondary adult career and technical students to complete this program are: Computation (Mathematics) and Communications (Reading and Language Arts). These grade level numbers correspond to a grade equivalent score obtained on a state designated basic skills examination.

Adult students with disabilities, as defined in Section 1004.02, Florida Statutes, may be exempted from meeting the Basic Skills requirements (Rule 6A-10.040). Students served in exceptional student education (except gifted) as defined in s. 1003.01, F.S., may also be exempted from meeting the Basic Skills requirement. Each school district and Florida College System Institution must adopt a policy addressing procedures for exempting eligible students with disabilities from the Basic Skills requirement as permitted in Section 1004.91, F.S.

Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

Note: postsecondary curriculum and regulated secondary programs cannot be modified.

Florida Department of Education
Student Performance Standards

Health Science Core Standards and Benchmarks

Career Certificate Program and College Level

The **Health Science Core** is required in the majority of Career Certificate Program and College Level health science programs**.** At the Career Certificate Program level, the health science core is offered through **Basic Health Care Worker (HSC0003) on page 2 of this document**. In college credit programs it is encompassed in **standards 1-11 listed on page 8 of this document.** Secondary and Postsecondary students completing the health science core will not have to repeat the core in any other health science programs in which it is a part of. When the recommended sequence is followed, the structure allows students to complete at specified points for employment or remain for advanced training or cross-training. A student who completes the applicable competencies at any occupational completion point may either continue with the training program or exit as an occupational completer.

Outcomes 01-11 are referred to as the Health Science Core and do not have to be completed if the student has previously completed the Core in another health occupations program at any level. The Core should be taken first in the program.

When offered as a Career Certificate Program or ATD clock hour program, the following course (standards 1-11) encompasses the Health Science Core:

Course Number: HSC0003 Occupational Completion Point: A Basic Healthcare Worker – 90 Hours	
01.0	Demonstrate knowledge of the healthcare delivery system and health occupations. The student will be able to:
01.01	Identify the basic components of the healthcare delivery system including public, private, government and non-profit.
01.02	Identify common methods of payment for healthcare services.
01.03	Describe the various types of healthcare providers and the range of services available including resources to victims of domestic violence.
01.04	Describe the composition and functions of a healthcare team.
01.05	Identify the general roles and responsibilities of the individual members of the healthcare team.
01.06	Identify the roles and responsibilities of the consumer within the healthcare delivery system.
01.07	Identify characteristics of effective teams.
01.08	Recognize methods for building positive team relationships.

	01.09 Discuss attributes and attitudes of an effective leader.
	01.10 Recognize factors and situations that may lead to conflict.
	01.11 Recognize effective techniques for managing team conflict.
	01.12 Describe factors that influence the current delivery system of healthcare.
	01.13 Explain the impact of emerging issues including technology, epidemiology, bioethics and socioeconomics on healthcare delivery systems.
02.0	Demonstrate the ability to communicate and use interpersonal skills effectively. The student will be able to:
	02.01 Develop basic speaking and active listening skills.
	02.02 Develop basic observational skills and related documentation strategies in written and oral form.
	02.03 Identify characteristics of successful and unsuccessful communication including communication styles and barriers.
	02.04 Identify characteristics of verbal and non-verbal cues.
	02.05 Use appropriate medical terminology and abbreviations.
	02.06 Discuss the importance of courtesy and respect for patients and other healthcare workers and maintain good interpersonal relationships.
	02.07 Explain the importance of patient/client educations regarding healthcare.
	02.08 Adapt communication skills to varied levels of understanding and cultural orientation including diverse age, cultural, economic, ethnic, and religious groups.
	02.09 Discuss elements of communication using a sender-receiver model.
	02.10 Distinguish between and report subjective and objective information.
	02.11 Report relevant information in order of occurrence.
03.0	Demonstrate legal and ethical responsibilities. The student will be able to:
	03.01 Explain the legal framework of the healthcare occupations including scope of practice legislation.
	03.02 Understand the concept of medical direction in pre-hospital care.
	03.03 Explain practices that could result in malpractice, liability, negligence, abandonment, false imprisonment and fraud.
	03.04 Explain procedures for accurate documentation and record keeping.

	03.05 Explain the importance of healthcare facility policy and procedures for employees.
	03.06 Explain the “Patient’s Bill of Rights”.
	03.07 Identify and explain standards of the Health Insurance Portability and Accountability Act (HIPAA).
	03.08 Describe advance directives.
	03.09 Describe informed consent.
	03.10 Explain the laws governing harassment, labor and employment.
	03.11 Differentiate between legal and ethical issues in healthcare.
	03.12 Describe a code of ethics consistent with the healthcare occupation.
	03.13 Identify and compare personal, professional, and organizational ethics.
	03.14 Discuss the limits of authority and responsibility of health care workers including legislated scope of practice.
	03.15 Recognize and report illegal and/or unethical practices of healthcare workers.
	03.16 Recognize and report abuse including domestic violence, neglect and suspected human trafficking.
	03.17 Distinguish between the five schedules of controlled substances.
04.0	Demonstrate an understanding of and apply wellness and disease concepts. The student will be able to:
	04.01 Describe strategies for prevention of diseases including health screenings and examinations.
	04.02 Identify personal health practices and environmental factors which affect optimal function of each of the major body systems.
	04.03 Identify psychological reactions to illness including defense mechanisms.
	04.04 Identify complementary and alternative health practices.
	04.05 Discuss the adverse effects of the use of alcohol, tobacco, and both legal and illegal drugs on the human body and apply safety practices related to these and other high risk behaviors.
	04.06 Explain the basic concepts of positive self-image, wellness and stress.
	04.07 Develop a wellness and stress control plan that can be used in personal and professional life.
	04.08 Identify and develop resilience building methods in response to mental health stressors.
	04.09 Explore and utilize the U.S. Department of Agriculture’s nutrition resources.

	04.10 Discuss the steps in the grief process.
05.0	Recognize and practice safety and security procedures. The student will be able to:
	05.01 Recognize safe and unsafe working conditions and report safety hazards.
	05.02 Explain why understanding how to safely use medical equipment is important.
	05.03 Explain and apply the theory of root- cause analysis.
	05.04 Identify and describe methods in medical error reduction and prevention in the various healthcare settings.
	05.05 Identify and practice security procedures for medical supplies and equipment.
	05.06 Explain personal safety procedures based on Occupations Safety and Health Administration (OSHA) and Centers for Disease Control (CDC) regulations including standard precautions.
	05.07 Recognize Safety Data Sheets and comply with safety signs, symbols, and labels.
	05.08 Explain proper body mechanics and ergonomics.
	05.09 Explain the procedure for properly identifying patients.
	05.10 Explain procedures for the safe transport and transfer of patients.
	05.11 Recognize fire, safety, disaster and evacuations procedures.
	05.12 Discuss the Joint Commission patient safety goals (www.jointcommission.org) and any other applicable accrediting/regulatory agency guidelines.
06.0	Recognize and respond to emergency situations. The student will be able to:
	06.01 Record and monitor vital signs accurately.
	06.02 Describe legal parameters relating to the administration of emergency care.
	06.03 Obtain and maintain training for certification on cardiopulmonary resuscitation (CPR), automated external defibrillator (AED), foreign body airway obstruction (FBAO), and first aid.
	06.04 Recognize adverse drug related emergencies and take appropriate first aid action.
07.0	Recognize and practice infection control procedures. The student will be able to:
	07.01 Define principles of infection control including standard and transmission-based precautions.
	07.02 Explain medical asepsis and practice procedures such as handwashing and isolation.

	07.03 Demonstrate the procedures to disinfect and decontaminate equipment after treating a patient with infectious disease.
	07.04 Explain surgical asepsis.
	07.05 Describe how to dispose correctly of biohazardous materials according to appropriate government guidelines such as OSHA.
08.0	Demonstrate an understanding of information technology applications in healthcare. The student will be able to:
	08.01 Describe technology applications in healthcare.
	08.02 Define terms and demonstrate basic computer skills.
	08.03 Recognize technology applications in healthcare.
	08.04 Interpret information from electronic medical documents.
	08.05 Identify methods of communication to access and distribute data such as fax, e-mail, and internet.
09.0	Demonstrate employability skills. The student will be able to:
	09.01 Identify personal traits or attitudes desirable in a member of the healthcare team.
	09.02 Exemplify basic professional standards of healthcare workers as they apply to hygiene, dress, language, confidentiality, and behavior (i.e. telephone etiquette, courtesy and self-introductions).
	09.03 Identify documents that may be required when applying for a job.
	09.04 Write an appropriate resume.
	09.05 Conduct a job search.
	09.06 Complete a job application form correctly.
	09.07 Examine levels of education, credentialing requirements including licensure and certification, employment opportunities, workplace environments, and career growth potential.
	09.08 Identify acceptable work habits.
	09.09 Recognize appropriate affective/professional behavior.
	09.10 Compare careers within the health science career pathways (diagnostic services, therapeutic services, health informatics, support services and biotechnology research and development).
10.0	Demonstrate knowledge of blood borne diseases. The student will be able to:
	10.01 Recognize emerging diseases and disorders.

	10.02 Distinguish between fact and fallacy about the transmission and treatment of diseases caused by blood borne pathogens.
	10.03 Identify community resources and services available to the individuals with diseases caused by blood borne pathogens.
	10.04 Identify "at risk" behaviors which promote the spread of diseases caused by blood borne pathogens and the public education necessary to combat the spread of these diseases.
	10.05 Explain infection control techniques designed to prevent the spread of diseases caused by blood borne pathogens to the care of all patients following Centers for Disease Control (CDC) guidelines.
	10.06 Explain the legal aspects of HIV/AIDS, including testing.
11.0	Apply basic math and science skills. The student will be able to:
	11.01 Draw, read, and report on graphs, charts, and tables.
	11.02 Measure time, temperature, distance, capacity, and mass/weight.
	11.03 Make, use and convert using both traditional and metric units.
	11.04 Make estimations and approximations and judge the reasonableness of the result.
	11.05 Convert from regular to 24-hour time.
	11.06 Demonstrate ability to evaluate and draw conclusions.
	11.07 Organize and communicate the results obtained by observation and experimentation.
	11.08 Ask appropriate scientific questions and recognize what is involved in experimental approaches to the solution of such questions.
	11.09 Calculate ratios.

Florida Department of Education
Student Performance Standards

When offered as a college credit program, AS/CCC/ATD, the following course (standards 1-11) encompasses the Health Science Core:

01.0	Demonstrate knowledge of the healthcare delivery system and health occupations. The student will be able to:
01.01	Identify the basic components of the healthcare delivery system including public, private, government and non-profit.
01.02	Identify common methods of payment for healthcare services.
01.03	Describe the various types of healthcare providers and the range of services available including resources to victims of domestic violence.
01.04	Describe the composition and functions of a healthcare team.
01.05	Identify the general roles and responsibilities of the individual members of the healthcare team.
01.06	Identify the roles and responsibilities of the consumer within the healthcare delivery system.
01.07	Identify characteristics of effective teams.
01.08	Recognize methods for building positive team relationships.
01.09	Analyze attributes and attitudes of an effective leader.
01.10	Recognize factors and situations that may lead to conflict.
01.11	Demonstrate effective techniques for managing team conflict.
01.12	Describe factors that influence the current delivery system of healthcare.
01.13	Explain the impact of emerging issues including technology, epidemiology, bioethics, and socioeconomics on healthcare delivery systems.
02.0	Demonstrate the ability to communicate and use interpersonal skills effectively. The student will be able to:
02.01	Develop basic speaking and active listening skills.
02.02	Develop basic observational skills and related documentation strategies in written and oral form.
02.03	Identify characteristics of successful and unsuccessful communication including communication styles and barriers.
02.04	Respond to verbal and non-verbal cues.
02.05	Compose written communication using correct spelling, grammar, formatting and confidentiality and specific formats of letter

		writing.
	02.06	Use appropriate medical terminology and abbreviations.
	02.07	Recognize the importance of courtesy and respect for patients and other healthcare workers and maintain good interpersonal relationships.
	02.08	Recognize the importance of patient/client educations regarding healthcare.
	02.09	Adapt communication skills to varied levels of understanding and cultural orientation including diverse age, cultural, economic, ethnic and religious groups.
	02.10	Analyze elements of communication using a sender-receiver model.
	02.11	Distinguish between and report subjective and objective information.
	02.12	Report relevant information in order of occurrence.
03.0	Demonstrate legal and ethical responsibilities. The student will be able to:	
	03.01	Discuss the legal framework of the healthcare occupations including scope of practice legislation.
	03.02	Explain practices that could result in malpractice, liability, negligence, abandonment, false imprisonment and fraud.
	03.03	Demonstrate procedures for accurate documentation and record keeping.
	03.04	Interpret healthcare facility policy and procedures.
	03.05	Explain the “Patient’s Bill of Rights”.
	03.06	Identify standards of the Health Insurance Portability and Accountability Act (HIPAA).
	03.07	Describe advance directives.
	03.08	Describe informed consent.
	03.09	Explain the laws governing harassment, labor, and employment.
	03.10	Differentiate between legal and ethical issues in healthcare.
	03.11	Describe a code of ethics consistent with the healthcare occupation.
	03.12	Identify and compare personal, professional, and organizational ethics.
	03.13	Recognize the limits of authority and responsibility of health care workers including legislated scope of practice.

	03.14 Recognize and report illegal and/or unethical practices of healthcare workers.
	03.15 Recognize and report abuse including domestic violence and neglect.
	03.16 Distinguish among the five schedules of controlled substances.
04.0	Demonstrate an understanding of and apply wellness and disease concepts. The student will be able to:
	04.01 Describe strategies for prevention of diseases including health screenings and examinations.
	04.02 Identify personal health practices and environmental factors which affect optimal function of each of the major body systems.
	04.03 Identify psychological reactions to illness including defense mechanisms.
	04.04 Identify complementary and alternative health practices.
	04.05 Discuss the adverse effects of the use of alcohol, tobacco, and both legal and illegal drugs on the human body and apply safety practices related to these and other high risk behaviors.
	04.06 Explain the basic concepts of positive self-image, wellness, and stress.
	04.07 Develop a wellness and stress control plan that can be used in personal and professional life.
	04.08 Explore and utilize the U.S. Department of Agriculture’s nutrition resources.
	04.09 Recognize the steps in the grief process.
05.0	Recognize and practice safety and security procedures. The student will be able to:
	05.01 Recognize safe and unsafe working conditions and report safety hazards.
	05.02 Demonstrate the safe use of medical equipment.
	05.03 Explain and apply the theory of root- cause analysis.
	05.04 Identify and describe methods in medical error reduction and prevention in the various healthcare settings.
	05.05 Identify and practice security procedures for medical supplies and equipment.
	05.06 Demonstrate personal safety procedures based on Occupations Safety and Health Administration (OSHA) and Centers for Disease Control (CDC) regulations including standard precautions.
	05.07 Recognize Safety Data Sheets and comply with safety signs, symbols, and labels.
	05.08 Demonstrate proper body mechanics and ergonomics.

	05.09 Demonstrate the procedure for properly identifying patients.
	05.10 Demonstrate procedures for the safe transport and transfer of patients.
	05.11 Describe fire, safety, disaster, and evacuations procedures.
	05.12 Discuss The Joint Commission patient safety goals (www.jointcommission.org) and any other applicable accrediting/regulatory agency guidelines.
06.0	Recognize and respond to emergency situations. The student will be able to:
	06.01 Record and monitor vital signs.
	06.02 Describe legal parameters relating to the administration of emergency care.
	06.03 Obtain and maintain training or certification on cardiopulmonary resuscitation (CPR), automated external defibrillator (AED), foreign body airway obstruction (FBAO), and first aid.
	06.04 Recognize adverse drug related emergencies and take appropriate first aid action.
07.0	Recognize and practice infection control procedures. The student will be able to:
	07.01 Define principles of infection control including standard and transmission-based precautions.
	07.02 Demonstrate knowledge of medical asepsis and practice procedures such as handwashing and isolation.
	07.03 Demonstrate knowledge of surgical asepsis.
	07.04 Describe how to dispose correctly of biohazardous materials according to appropriate government guidelines such as OSHA.
08.0	Demonstrate an understanding of information technology applications in healthcare. The student will be able to:
	08.01 Describe technology applications in healthcare.
	08.02 Define terms and demonstrate basic computer skills.
	08.03 Recognize technology applications in healthcare.
	08.04 Interpret information from electronic medical documents.
	08.05 Identify methods of communication to access and distribute data such as fax, e-mail and internet.
09.0	Demonstrate employability skills. The student will be able to:
	09.01 Identify personal traits or attitudes desirable in a member of the healthcare team.

	09.02 Exemplify basic professional standards of healthcare workers as they apply to hygiene, dress, language, confidentiality, and behavior (i.e. telephone etiquette, courtesy and self-introductions).
	09.03 Identify documents that may be required when applying for a job.
	09.04 Write an appropriate resume.
	09.05 Conduct a job search.
	09.06 Complete a job application form correctly.
	09.07 Examine levels of education, credentialing requirements including licensure and certification, employment opportunities, workplace environments, and career growth potential.
	09.08 Recognize levels of education, credentialing requirements, employment opportunities, workplace environments, and career growth potential.
	09.09 Identify acceptable work habits.
	09.10 Recognize appropriate affective/professional behavior.
	09.11 Compare careers within the health science career pathways (diagnostic services, therapeutic services, health informatics, support services and biotechnology research and development).
10.0	Demonstrate knowledge of blood borne diseases, including HIV/AIDS. The student will be able to:
	10.01 Recognize emerging diseases and disorders.
	10.02 Distinguish between fact and fallacy about the transmission and treatment of diseases caused by blood borne pathogens including Hepatitis B.
	10.03 Identify community resources and services available to the individuals with diseases caused by blood borne pathogens.
	10.04 Identify "at risk" behaviors which promote the spread of diseases caused by blood borne pathogens and the public education necessary to combat the spread of these diseases.
	10.05 Apply infection control techniques designed to prevent the spread of diseases caused by blood borne pathogens to the care of all patients following Centers for Disease Control (CDC) guidelines.
	10.06 Demonstrate knowledge of the legal aspects of HIV/AIDS, including testing.
11.0	Apply basic math and science skills. The student will be able to:
	11.01 Draw, read, and report on graphs, charts, and tables.
	11.02 Measure time, temperature, distance, capacity, and mass/weight.
	11.03 Make, use and convert using both traditional and metric units.
	11.04 Make estimations and approximations and judge the reasonableness of the result.

11.05 Convert from regular to 24-hour time.
11.06 Demonstrate ability to evaluate and draw conclusions.
11.07 Organize and communicate the results obtained by observation and experimentation.
11.08 Ask appropriate scientific questions and recognize what is involved in experimental approaches to the solution of such questions.
11.09 Calculate ratios.

Florida Department of Education
Student Performance Standards

Health Science Core Standards and Benchmarks

Secondary Level

The **Health Science Core** is a perquisite of the majority of secondary health science programs. The two credit core is required as a prerequisite for all programs except for Practical Nursing and Pharmacy Technician and consists of the courses Health Science Anatomy & Physiology (8417100) and Health Science Foundations (8417110). These courses were previously titled Health Science 1 and Health Science 2. Secondary students completing the two required courses will not have to repeat the core in postsecondary. When the recommended sequence is followed, the structure allows students to complete at specified points for employment or remain for advanced training or cross-training. A student who completes the applicable competencies at any occupational completion point may either continue with the training program or exit as an occupational completer.

The course *Anatomy and Physiology (2000350) or Anatomy and Physiology Honors (2000360)* may be substituted for the course Health Science Anatomy & Physiology (8417100) and their standards can be found at www.cpalms.org.

The course Health Science Anatomy & Physiology (8417100) is designated as an equally rigorous (EQ) science credit.

Course Structure

To teach the courses listed below, instructors must hold at least one of the teacher certifications indicated for that course.
The following table illustrates the secondary health core course structure:

Course Number	Course Title	Teacher Certification	Length	SOC Code	Level	Graduation Requirement
8417100 **OR**	Health Science Anatomy & Physiology **OR**	BIOLOGY 1 ANY HEALTH OCCUP G *(See DOE approved list)	1 credit	31-9099	3	EQ
2000350 **OR** *2000360*	*Anatomy and Physiology* **OR** *Anatomy and Physiology Honors*	SCIENCE @4 HEALTH 6 BIOLOGY 1 HEALTH ED @4				
8417110	Health Science Foundations	ANY HEALTH OCCUP G *(See DOE approved list)	1 credit	31-9099	3	CT

(Graduation Requirement Codes: CT= Career & Technical Education, EQ= Equally Rigorous Science, EC= Economics, MA= Mathematics, PL= Personal Financial Literacy)

Florida Department of Education
Student Performance Standards

Course Title: Health Science Anatomy & Physiology
Course Number: 8417100
Course Credit: 1

Course Description:

This course is part of the secondary Health Core consisting of a study of the human body, both structurally and functionally with emphasis on the pathophysiology and transmission of disease. Medical terminology is an integral part of the course.

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as, experimental quality, and safety procedures will be an integral part of this course. Students will interact with materials and primary sources of data or with secondary sources of data to observe and understand the natural world. Students will develop an understanding of measurement error, and develop the skills to aggregate, interpret, and present the data and resulting conclusions. Equipment and supplies will be provided to enhance these hands-on experiences for students. **A minimum of 20% of classroom time will be dedicated to laboratory experiences.**

CTE Standards and Benchmarks	
01.0	Analyze and interpret an overview of the human body, including organization and chemical process. The student will be able to:
01.01	Evaluate interrelationships of the basic structural and functional organization of the human body including chemical, cellular, tissue and organ systems.
01.02	Describe the basic molecular structures and primary functions of the four major categories of biological macromolecules.
01.03	Examine medical implications of body planes, directional terms, cavities, abdominal regions, and quadrants.
01.04	Discuss the chemical processes that maintain life, including homeostasis, cellular respiration, the role of enzymes as catalysts and the basic concepts of metabolism.
02.0	Apply correct medical terminology relating to body structure and function within a real-world application. The student will be able to:
02.01	Evaluate and apply anatomical terminology to describe location of parts or areas of the body and to describe the relation of one part to another.
02.02	Interpret correct medical terminology including roots, prefixes and suffixes to indicate anatomical structures and function.
02.03	Extend medical terminology to real-world applications.
03.0	Evaluate cells and tissues microscopically and macroscopically and relate their specialized functions. The student will be able to:

CTE Standards and Benchmarks	
	03.01 Discuss and describe cell structure and function in healthy tissue.
	03.02 Discuss and describe cell structure and function in diseased tissue including how damage to one tissue may impact the function of another tissue.
	03.03 Compare and contrast the four main types of tissue including the interrelationships of tissues.
	03.04 Discuss the location and function of tissues as it relates to homeostasis.
04.0	Analyze the integumentary system in relation to health and disease. The student will be able to:
	04.01 Apply medical terminology as related to the integumentary system.
	04.02 Discuss and describe the structure and function of the integumentary system across the lifespan.
	04.03 Demonstrate knowledge of cells and tissues in the integumentary system.
	04.04 Identify and analyze common diseases and disorders of the integumentary system including etiology, prevention, pathology, diagnosis and treatment/rehabilitation.
	04.05 Discuss or research health careers related to the integumentary system.
	04.06 Demonstrate knowledge of skills related to the integumentary system which may include infection control and hand washing skills.
05.0	Analyze the skeletal system in relation to health and disease. The student will be able to:
	05.01 Apply medical terminology as related to the skeletal system.
	05.02 Discuss and describe the structure and function of the skeletal system across the lifespan.
	05.03 Identify and explain major bone markings and their implications.
	05.04 Identify and explain joints and their implications.
	05.05 Discuss the interrelationship between calcium, hormones, and the skeletal system.
	05.06 Apply knowledge of cells and tissues in the skeletal system.
	05.07 Identify and analyze common diseases and disorders of the skeletal system including etiology, prevention, pathology, diagnosis and treatment/rehabilitation.
	05.08 Discuss or research health careers related to the skeletal system.

CTE Standards and Benchmarks	
	05.09 Demonstrate knowledge of skills related to the skeletal system which may include range of motion.
06.0	Analyze the muscular system in relation to health and disease. The student will be able to:
	06.01 Apply medical terminology as related to the muscular system.
	06.02 Discuss and describe the structure and function of the muscular system across the lifespan.
	06.03 Identify and explain the 3 main types of muscles and their implications.
	06.04 Interpret muscle function by examining attachment to bone.
	06.05 Discuss the interrelationship between calcium, ions, and the muscular system.
	06.06 Apply knowledge of cells and tissues in the muscular system.
	06.07 List the steps involved in the sliding filament of muscle contraction.
	06.08 Describe signal transmission across a myoneural/neuromuscular junction.
	06.09 Identify and analyze common diseases and disorders of the muscular system including etiology, prevention, pathology, diagnosis and treatment/rehabilitation.
	06.10 Discuss or research health careers related to the muscular system.
	06.11 Demonstrate knowledge of skills related to the muscular system which may include isometric and isotonic contractions.
07.0	Analyze the nervous system in relation to health and disease. The student will be able to:
	07.01 Apply medical terminology as related to the nervous system.
	07.02 Discuss and describe the structure and function of the nervous system across the lifespan.
	07.03 Identify and explain the interrelatedness of the Central Nervous System (CNS) and Peripheral Nervous System (PNS).
	07.04 Compare and contrast the divisions of the Autonomic Nervous System (ANS).
	07.05 Apply knowledge of cells and tissues in the nervous system.
	07.06 Explain how neurotransmitters help propagate electrical impulses.

CTE Standards and Benchmarks	
	07.07 Describe reflex pathways and their importance.
	07.08 Identify and analyze common diseases and disorders of the nervous system including etiology, prevention, pathology, diagnosis and treatment/rehabilitation.
	07.09 Discuss or research health careers related to the nervous system.
	07.10 Demonstrate knowledge of skills related to the nervous system which may include recognizing signs and symptoms of a stroke.
08.0	Analyze the endocrine system in relation to health and disease. The student will be able to:
	08.01 Apply medical terminology as related to the endocrine system.
	08.02 Discuss and describe the structure and function of the endocrine system across the lifespan.
	08.03 Compare and contrast endocrine and exocrine glands.
	08.04 Compare and contrast negative and positive feedback loops.
	08.05 Evaluate the relationship between the endocrine system and homeostasis in health and disease.
	08.06 Apply knowledge of cells and tissues in the endocrine system.
	08.07 Identify and analyze common diseases and disorders of the endocrine system including etiology, prevention, pathology, diagnosis and treatment/rehabilitation.
	08.08 Discuss or research health careers related to the endocrine system.
	08.09 Demonstrate knowledge of skills related to the endocrine system which may include recognizing the signs and symptoms of low blood sugar.
09.0	Analyze the cardiovascular/circulatory system in relation to health and disease. The student will be able to:
	09.01 Apply medical terminology as related to the cardiovascular system.
	09.02 Discuss and describe the structure and function of the cardiovascular system across the lifespan.
	09.03 Demonstrate knowledge of major blood vessels.
	09.04 Compare and contrast the structure and function of arteries, veins, and capillaries.
	09.05 Analyze the interdependence between systemic and pulmonary circulation.

CTE Standards and Benchmarks	
	09.06 Design a map or flow chart depicting the normal pathway of blood flow through the heart.
	09.07 Design a map or flow chart depicting the normal electrical pathway through the heart.
	09.08 Apply knowledge of cells and tissues in the cardiovascular system.
	09.09 Demonstrate knowledge of the composition of blood to include formed elements and plasma.
	09.10 Evaluate ABO blood types and Rh factor.
	09.11 Predict potential blood donors for a transfusion through the analysis of blood types with ABO and/or Rh compatibility.
	09.12 Identify and analyze common diseases and disorders of the cardiovascular system including etiology, prevention, pathology, diagnosis and treatment/rehabilitation.
	09.13 Discuss or research health careers related to the cardiovascular system.
	09.14 Demonstrate knowledge of skills related to the cardiovascular system which might include assessing pulse.
10.0	Analyze the lymphatic and immune systems in relation to health and disease. The student will be able to:
	10.01 Apply medical terminology as related to the lymphatic and immune systems.
	10.02 Discuss and describe the structure and function of the lymphatic and immune systems across the lifespan.
	10.03 Explain the importance of the accessory organs (thymus, tonsils, spleen, appendix, Peyer's patch) promoting the effectiveness of the lymphatic and immune system.
	10.04 Compare and contrast passive and active immunity.
	10.05 Discuss the impact of B cells and T cells on diseases of the immune system.
	10.06 Evaluate and discuss the body's defense mechanisms in relation to common communicable diseases.
	10.07 Apply knowledge of cells and tissues in the lymphatic and immune systems.
	10.08 Identify and analyze common diseases and disorders of the lymphatic and immune system including etiology, prevention, pathology, diagnosis, and treatment/rehabilitation.
	10.09 Discuss or research health careers related to the lymphatic and immune systems.
11.0	Analyze the respiratory system in relation to health and disease. The student will be able to:

CTE Standards and Benchmarks	
	11.01 Apply medical terminology as related to the respiratory system.
	11.02 Discuss and describe the structure and function of the respiratory system across the lifespan.
	11.03 Evaluate the interrelatedness of the cardiovascular and respiratory systems.
	11.04 Apply knowledge of cells and tissues in the respiratory system.
	11.05 Identify and analyze common diseases and disorders of the respiratory system including etiology, prevention, pathology, diagnosis and treatment/rehabilitation.
	11.06 Discuss or research health careers related to the respiratory system.
	11.07 Demonstrate knowledge of skills related to the respiratory system which might include monitoring respirations.
12.0	Analyze the digestive system in relation to health and disease. The student will be able to:
	12.01 Apply medical terminology as related to the digestive system.
	12.02 Discuss and describe the structure and function of the digestive system across the lifespan.
	12.03 Apply knowledge of cells and tissues in the digestive system.
	12.04 Identify and analyze common diseases and disorders of the digestive system including etiology, prevention, pathology, diagnosis and treatment/rehabilitation.
	12.05 Discuss or research health careers related to the digestive system.
	12.06 Demonstrate knowledge of skills related to the digestive system which might include a nutritional self-assessment.
13.0	Analyze the urinary system in relation to health and disease. The student will be able to:
	13.01 Apply medical terminology as related to the urinary system.
	13.02 Discuss and describe the structure and function of the urinary system across the lifespan.
	13.03 Justify the interrelatedness of the urinary and cardiovascular system in promoting homeostasis.
	13.04 Apply knowledge of cells and tissues in the urinary system.
	13.05 Identify and analyze common diseases and disorders of the urinary system including etiology, prevention, pathology, diagnosis and treatment/rehabilitation.

CTE Standards and Benchmarks	
	13.06 Discuss or research health careers related to the urinary system.
	13.07 Demonstrate knowledge of skills related to the urinary system which may include how to use urine test strips.
14.0	Analyze the both the male and female reproductive systems in relation to health and disease. The student will be able to:
	14.01 Apply medical terminology as related to the each of the male and female reproductive systems.
	14.02 Discuss and describe the structure and function of both reproductive systems across the lifespan.
	14.03 Apply knowledge of cells and tissues of both reproductive systems.
	14.04 Identify and analyze common diseases and disorders of both reproductive systems including etiology, prevention, pathology, diagnosis and treatment/rehabilitation.
	14.05 Discuss or research health careers related to both reproductive systems.
	14.06 Explain fetal development with regard to trimesters and measuring according to the fetal growth chart.
15.0	Identify and explain factors relating to genetics and disease. The student will be able to:
	15.01 Discuss DNA and its role in human heredity.
	15.02 Describe the role of human genetics in relation to genetic diseases.
	15.03 Discuss or research current issues related to genetic research.
	15.04 Explore the relationship between mutation, cell cycle and uncontrolled cell growth that can result in cancer.
	15.05 Explore how environmental factors contribute to an individual’s overall wellness and quality of life.
16.0	Evaluate and apply the principles of disease transmission and control to real-world scenarios. The student will be able to:
	16.01 Discuss and explain the direct and indirect transmission of disease.
	16.02 Discuss and apply the principles of the chain of infection to real-world scenarios.
	16.03 Categorize the common morphology of microorganisms affecting the human body.
	16.04 Identify and analyze common diseases caused by microorganisms.

Florida Department of Education
Student Performance Standards

Course Title: **Health Science Foundations**
Course Number: **8417110**
Course Credit: **1**

Course Description:

This course is part of the Secondary Health Core designed to provide the student with an in depth knowledge of the health care system and associated occupations. Emphasis is placed on communication and interpersonal skills, use of technology, ethics and the development of critical thinking and problem solving skills. Students will also learn first aid skills and demonstrate the measurement of vital signs. Students may shadow professionals throughout the course.

CTE Standards and Benchmarks	
17.0	Demonstrate knowledge of the health care delivery system and health occupations. The student will be able to:
17.01	Identify the basic components of the health care delivery system including public, private, government and non-profit.
17.02	Identify common methods of payment for healthcare services.
17.03	Describe the various types of healthcare providers and the range of services available including resources to victims of domestic violence.
17.04	Describe the composition and functions of a healthcare team.
17.05	Identify the general roles and responsibilities of the individual members of the healthcare team.
17.06	Identify the roles and responsibilities of the consumer within the healthcare delivery system.
17.07	Identify characteristics of effective teams.
17.08	Recognize methods for building positive team relationships.
17.09	Discuss attributes and attitudes of an effective leader.
17.10	Recognize factors and situations that may lead to conflict.
17.11	Recognize effective techniques for managing team conflict.

CTE Standards and Benchmarks	
	17.12 Describe factors that influence the current delivery system of healthcare.
	17.13 Explain the impact of emerging issues including technology, epidemiology, bioethics, and socioeconomics on healthcare delivery systems.
18.0	Demonstrate the ability to communicate and use interpersonal skills effectively. The student will be able to:
	18.01 Develop basic speaking and active listening skills.
	18.02 Develop basic observational skills and related documentation strategies in written and oral form.
	18.03 Identify characteristics of successful and unsuccessful communication including communication styles and barriers.
	18.04 Identify characteristics of verbal and non-verbal cues.
	18.05 Use appropriate medical terminology and abbreviations.
	18.06 Discuss the importance of courtesy and respect for patients and other healthcare workers and maintain good interpersonal relationships.
	18.07 Discuss the importance of patient/client education regarding healthcare.
	18.08 Adapt communication skills to varied levels of understanding and cultural orientation including diverse age, cultural, economic, ethnic and religious groups.
	18.09 Discuss elements of communication using a sender-receiver model.
	18.10 Distinguish between and report subjective and objective information.
	18.11 Report relevant information in order of occurrence.
19.0	Demonstrate legal and ethical responsibilities. The student will be able to:
	19.01 Explain the legal framework of the healthcare occupations including scope of practice legislation.
	19.02 Explain practices that could result in malpractice, liability, negligence, abandonment, false imprisonment, and fraud.
	19.03 Explain procedures for accurate documentation and record keeping.
	19.04 Explain the importance of healthcare facility policy and procedures for employees.
	19.05 Explain the “Patient’s Bill of Rights”.

CTE Standards and Benchmarks	
	19.06 Identify and explain standards of the Health Insurance Portability and Accountability Act (HIPAA).
	19.07 Describe advance directives.
	19.08 Describe informed consent.
	19.09 Explain the laws governing harassment, labor and employment.
	19.10 Differentiate between legal and ethical issues in healthcare.
	19.11 Describe a code of ethics consistent with the healthcare occupation.
	19.12 Identify and compare personal, professional, and organizational ethics.
	19.13 Discuss the limits of authority and responsibility of health care workers including legislated scope of practice.
	19.14 Recognize and report illegal and/or unethical practices of healthcare workers.
	19.15 Recognize and report abuse including domestic violence, neglect and suspected human trafficking.
	19.16 Distinguish between the five schedules of controlled substances.
20.0	Demonstrate an understanding of and apply wellness and disease concepts. The student will be able to:
	20.01 Describe strategies for prevention of diseases including health screenings and examinations.
	20.02 Identify personal health practices and environmental factors which affect optimal function of each of the major body systems.
	20.03 Identify psychological reactions to illness including defense mechanisms.
	20.04 Identify complementary and alternative health practices.
	20.05 Discuss the adverse effects of the use of alcohol, tobacco, and both legal and illegal drugs on the human body and apply safety practices related to these and other high risk behaviors.
	20.06 Explain the basic concepts of positive self-image, wellness and stress.
	20.07 Develop a wellness and stress control plan that can be used in personal and professional life.
	20.08 Explore and utilize the U.S. Department of Agriculture’s nutrition resources.

CTE Standards and Benchmarks	
	20.09 Discuss the steps in the grief process.
21.0	Recognize and practice safety and security procedures. The student will be able to:
	21.01 Recognize safe and unsafe working conditions and report safety hazards.
	21.02 Explain why understanding how to safely use medical equipment is important.
	21.03 Explain and apply the theory of root- cause analysis.
	21.04 Identify and describe methods in medical error reduction and prevention in the various healthcare settings.
	21.05 Identify and practice security procedures for medical supplies and equipment.
	21.06 Explain personal safety procedures based on Occupations Safety and Health Administration (OSHA) and Centers for Disease Control (CDC) regulations including standard precautions.
	21.07 Recognize Safety Data Sheets and comply with safety signs, symbols, and labels.
	21.08 Explain proper body mechanics and ergonomics.
	21.09 Explain the procedure for properly identifying patients.
	21.10 Explain procedures for the safe transport and transfer of patients.
	21.11 Recognize fire, safety, disaster and evacuations procedures.
	21.12 Discuss the Joint Commission patient safety goals (www.jointcommission.org) and any other applicable accrediting/regulatory agency guidelines.
22.0	Recognize and respond to emergency situations. The student will be able to:
	22.01 Record and monitor vital signs accurately.
	22.02 Describe legal parameters relating to the administration of emergency care.
	22.03 Obtain and maintain training for certification on cardiopulmonary resuscitation (CPR), automated external defibrillator (AED), foreign body airway obstruction (FBAO), and first aid.
	22.04 Recognize adverse drug related emergencies and take appropriate first aid action.
23.0	Recognize and practice infection control procedures. The student will be able to:

CTE Standards and Benchmarks	
	23.01 Define principles of infection control including standard and transmission-based precautions.
	23.02 Explain medical asepsis and practice procedures such as handwashing and isolation.
	23.03 Explain surgical asepsis.
	23.04 Describe how to dispose correctly of biohazardous materials according to appropriate government guidelines such as OSHA.
24.0	Demonstrate an understanding of information technology applications in healthcare. The student will be able to:
	24.01 Describe technology applications in healthcare.
	24.02 Define terms and demonstrate basic computer skills.
	24.03 Recognize technology applications in healthcare.
	24.04 Interpret information from electronic medical documents.
	24.05 Identify methods of communication to access and distribute data such as fax, e-mail, and internet.
25.0	Demonstrate employability skills. The student will be able to:
	25.01 Identify personal traits or attitudes desirable in a member of the healthcare team.
	25.02 Exemplify basic professional standards of healthcare workers as they apply to hygiene, dress, language, confidentiality and behavior (i.e., telephone etiquette, courtesy, and self-introductions).
	25.03 Identify documents that may be required when applying for a job.
	25.04 Write an appropriate resume.
	25.05 Conduct a job search.
	25.06 Complete a job application form correctly.
	25.07 Examine levels of education, credentialing requirements including licensure and certification, employment opportunities, workplace environments, and career growth potential.
	25.08 Identify acceptable work habits.
	25.09 Recognize appropriate affective/professional behavior.

CTE Standards and Benchmarks	
	25.10 Compare careers within the health science career pathways (diagnostic services, therapeutic services, health informatics, support services and biotechnology research and development).
26.0	Demonstrate knowledge of blood borne diseases. The student will be able to:
	26.01 Recognize emerging diseases and disorders.
	26.02 Distinguish between fact and fallacy about the transmission and treatment of diseases caused by blood borne pathogens.
	26.03 Identify community resources and services available to the individuals with diseases caused by blood borne pathogens.
	26.04 Identify "at risk" behaviors which promote the spread of diseases caused by blood borne pathogens and the public education necessary to combat the spread of these diseases.
	26.05 Explain infection control techniques designed to prevent the spread of diseases caused by blood borne pathogens to the care of all patients following Centers for Disease Control (CDC) guidelines.
	26.06 Explain the legal aspects of HIV/AIDS, including testing.
27.0	Apply basic math and science skills. The student will be able to:
	27.01 Draw, read, and report on graphs, charts and tables.
	27.02 Measure time, temperature, distance, capacity, and mass/weight.
	27.03 Make, use and convert using both traditional and metric units.
	27.04 Make estimations and approximations and judge the reasonableness of the result.
	27.05 Convert from regular to 24 hour time.
	27.06 Demonstrate ability to evaluate and draw conclusions.
	27.07 Organize and communicate the results obtained by observation and experimentation.
	27.08 Ask appropriate scientific questions and recognize what is involved in experimental approaches to the solution of such questions.
	27.09 Calculate ratios.

Florida Department of Education
Curriculum Framework

Program Title: **Firefighter/ Emergency Medical Technician - Combined**
Program Type: **Career Preparatory**
Career Cluster: **Law, Public Safety, & Security/ Health Science**

Career Certificate Program		
Program Number	P430217	
CIP Number	0743020313	
Grade Level	30, 31	
Program Length	792 Hours	
Teacher Certification: OCPs A&B	Refer to the **Program Structure** section.	
Teacher Certification: OCPs C & D	Refer to the **Program Structure** section.	
CTSO	FPSA, HOSA	
SOC Codes (all applicable)	For program SOC codes, please see the Program and Course Tables section of the CTE Program Resources page linked below.	
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml	
Basic Skills Level	Computation (Mathematics): 10	Communication (Reading and Language Arts): 10

 # These certifications can only be used for adjunct faculty. Please refer to 64J-1.201, F.A.C. for the EMS instructor qualifications.

Purpose

The purpose of this program is to provide the necessary training required for students to become certified firefighters as well as licensed Emergency Medical Technicians. It is not intended for those who are currently certified/licensed as either firefighters or EMTs. Students wishing to add an additional certification to an existing credential must enroll in either the Firefighter program or the Emergency Medical Technician program.

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Law, Public Safety and Security and Health Science career clusters; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills.

"All EMR/EMT/Paramedic students are required to complete the 4-hour Traffic Incident Management Safety (TIMS) course at least once. This requirement can be fulfilled either as a prerequisite or as part of the curriculum, at the discretion of the EMS education program."

“It is highly recommended, though not mandatory, that courses in medical terminology, anatomy, and pharmacology be completed before enrolling in EMT and Paramedic training.”

Program Structure

This program is a planned sequence of instruction consisting of 3 occupational completion points.

This program is comprised of courses which have been assigned course numbers in the SCNS (Statewide Course Numbering System) in accordance with Section 1007.24 (1), F.S. Career and Technical credit shall be awarded to the student on a transcript in accordance with Section 1001.44(3)(b), F.S. **(NOTE: Bureau of Fire Standards and Training (BFST) course number system on their frameworks is not the same as SCNS. Ensure you to report the FDOE SCNS Course Number.)**

To teach the courses listed below, instructors must hold at least one of the teacher certifications indicated for that course.

The following table illustrates the postsecondary program structure:

OCP	Course Number	Course Title	Teacher Certification	Length
A	FFP0030	Firefighter I	FIRE FIGHT 7G	191 hours
B	FFP0031	Firefighter II		301 hours
C	EMS0110	Emergency Medical Technician	PARAMEDIC @7 7G # EMT 7G # REG NURSE 7 G # PRAC NURSE @7 %7%G *(Must be a Registered Nurse)	300 hours

Regulated Programs

Firefighter Regulation

Pursuant to 633.128, Florida Statutes, the Department of Financial Service, Division of State Fire Marshal, has established training requirements for firefighters and volunteer firefighters. These requirements are implemented by Rule 69A-37.055, Florida Administrative Code. This program is a planned sequence of instruction consisting of two occupational completion points. **(NOTE: The curriculum frameworks are subject to change by the Bureau of Fire Standards and Training (BFST) in accordance with statutory or Florida Administrative Code (F.A.C.) rule changes.)**

EMT Regulation

The EMT component of this combined program prepares students for certification as EMT's in accordance with Chapter 64J of the Florida Administrative Code. The program must be approved by the Department of Health, Office of Emergency Medical Services, and the curriculum must adhere to the US Department of Transportation (DOT), National EMS Education Standards for EMT. This is the initial level for a career in emergency medical services and the primary prerequisite for paramedic training and certification.

The EMT component of this program meets the Department of Health trauma score card methodologies and Sudden Unexpected Infant Death Syndrome training education requirements. Upon completion of this component, the instructor will provide a certificate to the student verifying that these requirements have been met. Programs may also teach domestic violence and prevention of medical errors education and may choose to provide a certificate to the student verifying that this education has been completed.

Please refer to chapter 401, F.S. for more information on disqualification for the EMT license through the Office of Emergency Medical Services, Department of Health.

The EMT component of this program must be taught by an instructor meeting the qualifications as set forth in 64J-1.0201, FAC.

An American Heart Association or Red Cross certification or equivalent in "professional" Basic Life Support is required of all candidates for entrance into the EMT component of this program.

The Student Performance Standards for Emergency Medical Technician were adapted from the US Department of Transportation (DOT) National EMS Educational Standards for EMT.

401.2701, F.S. requires that the instructor-student ratio should not exceed 1:6. Hospital activity shall include a minimum of 20 hours of supervised clinical supervision, including 10 hours in a hospital emergency department. Clinical activity shall include appropriate patient assessment skills, intervention and documentation relevant to each clinical rotation.

Field internship shall include a competency based program to assure appropriate pre-hospital assessment and management of medical and trauma patients, as well as associated manual skills. The field internship activity shall include a minimum of 5 emergency runs resulting in patient care and transport appropriate for the EMT. In addition, the patient care component should include minimum competencies in patient assessment, airway management and ventilation, trauma and medical emergencies.

Florida's Career Readiness Skills for CTE Programs

Employability Skills	
01.0	Apply academic skills to workplace scenarios.
01.01	Use reading skills.
01.02	Use writing skills.
01.03	Use mathematical strategies and procedures.
01.04	Use scientific principles and procedures.
02.0	Design a solution to an industry problem.
02.01	Use critical thinking.
02.02	Use creativity.
02.03	Make sound decisions.
02.04	Solve problems.
02.05	Reason.
02.06	Plan and organize.
03.0	Manage resources within an industry project
03.01	Manage time.
03.02	Manage money or resources.
03.03	Manage materials.
03.04	Manage personnel.
04.0	Oversee the subcomponents, operations and output of a technical or organizational system.
04.01	Manage systems.
04.02	Monitor systems.
04.03	Improve systems.
05.0	Use information for decision making.
05.01	Locate information.
05.02	Organize information.
05.03	Use information.

	05.04 Analyze information.
	05.05 Communicate information.
06.0	Apply relevant technology to workplace scenarios to aid productivity.
	06.01 Use technology.
07.0	Interpret and express interpersonal communication.
	07.01 Communicate verbally.
	07.02 Listen actively.
	07.03 Comprehend written material.
	07.04 Convey information in writing.
	07.05 Communicate nonverbally.
	07.06 Interpret nonverbal communication.
08.0	Interact with others to accomplish workplace goals.
	08.01 Collaborate with others in a team.
	08.02 Respond to customer needs.
	08.03 Exercise leadership.
	08.04 Negotiate to resolve conflict.
	08.05 Respect others.
09.0	Manage personal behavior to maximize productivity and professional growth.
	09.01 Demonstrate responsibility and self-discipline.
	09.02 Adapt and show flexibility.
	09.03 Work independently.
	09.04 Demonstrate a willingness to learn.
	09.05 Demonstrate integrity.
	09.06 Demonstrate professionalism.
	09.07 Take initiative.
	09.08 Display positive attitude.
	09.09 Take responsibility for professional growth.

Job Attainment	
10.0	Find, assess and apply to job opportunities.
10.01	Identify online job posts relevant to his or her career aspirations.
10.02	Compare and contrast the job posts' required qualifications, job duties, compensation, benefits and employers.
10.03	Define what information, documentation and writing prompts are required for the positions.
11.0	Communicate personal competence, character and fit for a job opportunity.
11.01	Develop a resume.
11.02	Write a cover letter.
11.03	Curate a professional portfolio that includes work products.
11.04	Prepare for and experience a mock job interview.
12.0	Cultivate and leverage relationships to professionally advance.
12.01	Request a signed reference letter, letter of recommendation and/or an online skill/professionalism endorsement.
12.02	Develop a plan to cultivate a professional digital footprint.
12.03	Develop a networking plan for a specific industry of interest.

Standards

Firefighter Component

The BFST approved curricula **Firefighter I & II** is available at: https://www.myfloridacfo.com/division/sfm/bfst/standards/fire-certifications/certification---florida-firefighter.

Emergency Medical Technician Component

01.0 Demonstrate a simple depth, foundational breadth of knowledge of EMS systems.
02.0 Demonstrate a simple depth, simple breadth of knowledge of research and evidence-based decision making.
03.0 Demonstrate a fundamental depth, foundational breadth of knowledge of workforce safety and wellness.
04.0 Demonstrate a fundamental depth, foundational breadth of knowledge of the principles of medical documentation and report writing.
05.0 Demonstrate a simple depth, simple breadth of knowledge of the EMS communication system, communication with other health care professionals, and team communication.
06.0 Demonstrate a simple depth, simple breadth of knowledge of the principles of therapeutic communication.
07.0 Demonstrate a fundamental depth, foundational breadth of knowledge of medical legality and ethics.
08.0 Demonstrate a fundamental knowledge of the anatomy and function of all human systems to the practice of EMS.
09.0 Demonstrate a fundamental knowledge in the use of medical terminology.
10.0 Demonstrate a fundamental knowledge of the causes and pathophysiology of shock and the components of resuscitation.
11.0 Demonstrate a fundamental knowledge of life span development to patient assessment and management
12.0 Demonstrate a simple knowledge of the principles of illness and injury prevention in emergency care.
13.0 Demonstrate a simple depth, simple breadth of knowledge of pharmacology, medication safety, and medication types used during an emergency.
14.0 Demonstrate a fundamental depth, simple breadth of knowledge of emergency medications within the scope of practice of the EMT.
15.0 Demonstrate a fundamental depth, foundational breadth of knowledge of respiration.
16.0 Demonstrate a fundamental depth, foundational breadth of knowledge of airway management across the life span within the scope of practice of the EMT.
17.0 Demonstrate a fundamental depth, foundational breadth of knowledge of assessment and management utilizing ventilation patients of all ages.
18.0 Demonstrate a fundamental depth, foundational breadth of knowledge of scene management and multiple patient situations.
19.0 Demonstrate a fundamental depth, simple breadth of knowledge of the primary assessment for all patient situations.
20.0 Demonstrate a fundamental depth, foundational breadth of knowledge of the components of history taking.
21.0 Demonstrate a fundamental depth, foundational breadth of knowledge of techniques used for a secondary assessment.
22.0 Demonstrate a simple depth, simple breath of knowledge of monitoring devices within the scope of practice of the EMT.
23.0 Demonstrate a fundamental depth, foundational breadth of knowledge of how and when to perform a reassessment for all patient situations.
24.0 Demonstrate a simple depth, foundation breadth of knowledge of pathophysiology, assessment and management of medical complaints.
25.0 Demonstrate a fundamental depth, foundational breadth of knowledge of the assessment and management of neurologic disorders/emergencies patients of all ages.

26.0 Demonstrate a fundamental depth, foundational breadth of knowledge of the assessment and management of abdominal and gastrointestinal disorders/emergencies patients of all ages.
27.0 Demonstrate a fundamental depth, foundational breadth of knowledge of the assessment and management of immunology disorders/emergencies patients of all ages.
28.0 Demonstrate a simple depth, simple breadth of knowledge of the assessment and management of a patient who may have an infectious disease patients of all ages.
29.0 Demonstrate a fundamental depth, foundational breadth of knowledge of the assessment and management of endocrine disorders/emergencies patients of all ages.
30.0 Demonstrate a fundamental depth, foundational breadth of knowledge regarding the assessment and management of psychiatric emergencies patients of all ages.
31.0 Demonstrate a fundamental depth, foundational breadth of knowledge of the assessment and management of cardiovascular emergencies patients of all ages.
32.0 Demonstrate a fundamental depth, foundational breadth of knowledge of the assessment and management of toxicological (poisoning and overdose) emergencies patients of all ages.
33.0 Demonstrate a fundamental depth, foundational breadth of knowledge of the assessment and management of respiratory disorders/emergencies for patients of all ages.
34.0 Demonstrate a simple depth, simple breadth of knowledge of the assessment, and management of hematology disorders patients of all ages.
35.0 Demonstrate a simple in-depth, simple breath of knowledge of the assessment and management of genitourinary/ renal emergency patients of all ages.
36.0 Demonstrate a fundamental depth, foundational breadth of knowledge of the assessment and management of gynecologic emergencies patients of all ages
37.0 Demonstrate a fundamental depth, foundational breadth of knowledge of the assessment and management of non-traumatic fractures patients of all ages.
38.0 Demonstrate a simple depth, simple breadth of knowledge of assessment and management of diseases of the eyes, ears, nose, and throat patients of all ages.
39.0 Demonstrate a fundamental knowledge of the causes, pathophysiology, and management of shock and respiratory failure patients of all ages.
40.0 Demonstrate a fundamental depth, foundational breadth of knowledge of pathophysiology, assessment and management of the trauma patients of all ages.
41.0 Demonstrate a fundamental depth, foundational breadth of knowledge of pathophysiology, assessment, and management of bleeding patients of all ages.
42.0 Demonstrate a fundamental depth, simple breadth of knowledge of pathophysiology, assessment and management of chest trauma patients of all ages.
43.0 Demonstrate a fundamental depth, simple breadth of knowledge of pathophysiology, assessment and management of abdominal and genitourinary trauma patients of all ages.
44.0 Demonstrate a fundamental depth, foundational breadth of knowledge of pathophysiology, assessment, and management of orthopedic trauma patients of all ages.
45.0 Demonstrate a fundamental depth, foundational breadth of knowledge of pathophysiology, assessment, and management of soft tissue trauma patients of all ages.

46.0 Demonstrate a fundamental depth, foundational breadth of knowledge of pathophysiology, assessment, and management of head, facial, neck and spine trauma patients of all ages.
47.0 Demonstrate a fundamental depth, foundational breadth of knowledge of pathophysiology, assessment, and management of nervous system trauma patients of all ages.
48.0 Demonstrate a fundamental depth, foundational breadth of knowledge of pathophysiology, assessment and management of trauma patients with special considerations for patients of all ages.
49.0 Demonstrate a fundamental depth, foundational breadth of knowledge of pathophysiology, assessment and management of environmental emergencies patients of all ages.
50.0 Demonstrate a fundamental depth, foundational breadth of knowledge of pathophysiology, assessment, and management of multi-system trauma and blast injuries patients of all ages.
51.0 Demonstrate a fundamental depth, foundational breadth of knowledge of management of the obstetric patient within the scope of practice of the EMT.
52.0 Demonstrate a fundamental depth, foundational breadth of knowledge of management of the newborn and neonatal patient within the scope of practice of the EMT.
53.0 Demonstrate a fundamental depth, fundamental breath of knowledge of management of the pediatric patient within the scope of practice of the EMT.
54.0 Demonstrate a fundamental depth, foundational breadth of knowledge of management of the geriatric patient within the scope of practice of the EMT.
55.0 Demonstrate a simple depth, simple breadth of knowledge of the management of the patient with special challenges for patients of all ages.
56.0 Demonstrate a simple depth, foundational breadth of knowledge of risks and responsibilities of transport.
57.0 Demonstrate a fundamental depth, fundamental breadth of knowledge of establishing and working within the incident management system.
58.0 Demonstrate a simple depth, foundational breadth of knowledge of responding to an emergency during a multiple casualty incident.
59.0 Demonstrate a simple depth, simple breadth of knowledge of safe air medical operations and criteria for utilizing air medical response.
60.0 Demonstrate a simple depth, simple breadth of knowledge for safe vehicle extrication and use of simple hand tools.
61.0 Demonstrate a simple depth, simple breadth of knowledge of risks and responsibilities of operating in a cold zone at a hazardous material or other special incident.
62.0 Demonstrate a simple depth, simple breadth of knowledge of risks and responsibilities of operating on the scene of a natural or man-made disaster.

Florida Department of Education
Student Performance Standards

Program Title: Firefighter/ Emergency Medical Technician - Combined
Career Certificate Program Number: P430217

Course Number: FFP0030
Occupational Completion Point: A
Firefighter I – 191 Hours

The **Bureau of Fire Standards and Training (BFST)** approved curricula is available at:

Firefighter I: https://www.myfloridacfo.com/division/sfm/bfst/standards/fire-certifications/certification---florida-firefighter.

Course Number: FFP0031
Occupational Completion Point: B
Firefighter II – 301 Hours

Firefighter II: https://www.myfloridacfo.com/division/sfm/bfst/standards/fire-certifications/certification---florida-firefighter.

Course Number: EMS0110
Occupational Completion Point: C
Emergency Medical Technician – 300 Hours

01.0	**EMS Systems:** Demonstrate a simple depth, foundational breadth of knowledge of EMS systems. The student will be able to:	
	01.01	Define Emergency Medical Services (EMS) systems.
	01.02	Discuss the historical background of the development of the EMS system.
	01.03	Identify the four levels of national EMS providers (EMR, EMT, AEMT and PM) as well as the three levels (EMR, EMT, and PM) in the State of Florida.
	01.04	Discuss the specific statutes and regulations regarding the EMS system in Florida.
	01.05	Discuss vehicle and equipment readiness.
	01.06	Characterize the EMS system's role in prevention and public education.
	01.07	Systems of care, e.g., Stroke, STEM, Trama, Pediatrics (S, F).
	01.08	MIH/SCP and other EMS-related specialty roles (S, S).
	01.09	Discuss the roles and responsibilities of the EMT related to personal safety of the crew, patient and by standers.
	01.10	Discuss the roles and responsibilities of the EMT to operate emergency vehicles, provide scene leadership and perform patient assessment and administer emergency care.

01.11	Discuss the maintenance of and differences between certification and licensure for the EMS professional in the State of Florida and NREMT.
01.12	Define quality improvement and discuss the EMT's role in the process.
01.13	Quality improvement vs. quality assurance (S, F).
01.14	Role or Medical oversight (S, S).
01.15	Culture of safety.
01.16	Patient Safety (S, F).
01.17	Identify the basics of common methods of payment for healthcare services.
01.18	Analyze attributes and attitudes of an effective leader.
01.19	Demonstrate effective techniques for managing team conflict.
01.20	Describe factors that influence the current delivery system of healthcare.
01.21	Continuum of care (S, F).
01.22	Discuss the importance of continuing medical education and skills retention.
01.23	Assess personal attitudes and demeanor that may distract from professionalism.
01.24	Serve as a role model and exhibit professional behaviors in the following areas: • Integrity • Empathy • Self-motivation • Appearance and personal hygiene • Self-confidence • Communications (including phone, email and social media etiquette) • Time management • Teamwork and diplomacy • Respect • Patient advocacy (inclusive of those with special needs, alternate lifestyles and cultural diversity) • Careful delivery of service
02.0	**Research:** Demonstrate a simple depth, simple breadth of knowledge of research and evidence-based decision making. The student will be able to:
02.01	Discuss EMS research and evidence-based decision making. • Conduct scientific literature searches • Read, interpret, and extract information from journal articles relevant to a project
02.02	Explain the importance of assessing and treating patients based on evidence-based decision-making.
02.03	Interpret graphs, charts, and tables.

	02.04 Measure time, temperature, distance, capacity, and mass/weight.
	02.05 Convert and use traditional and metric units.
	02.06 Make estimations, approximations and judge the reasonableness of the result.
	02.07 Convert time from a 12-hour format to a 24-hour format
	02.08 Demonstrate ability to evaluate and draw conclusions.
	02.09 Calculate ratios.
	02.10 Explain the rationale for the EMS system gathering data.
	02.11 Impact of research on EMT care (S, S).
	02.12 Data collection (S, S).
	02.13 Evidence- based decision making (S, S).
03.0	**Workforce Safety and Wellness:** Demonstrate a fundamental depth, foundational breadth of knowledge of workforce safety and wellness. The student will be able to:
	03.01 Explain the need to determine scene safety.
	03.02 Discuss the importance of body substance isolation (BSI).
	03.03 Describe the steps and equipment the EMT should take for personal protection from airborne and blood borne pathogens and communicable disease.
	03.04 List possible emotional reactions that an individual (EMT and EMT family, Patient and Patient family) may experience when faced with trauma, illness, death and dying.
	03.05 Discuss the steps the EMT should take when approaching a family confronted with death and dying.
	03.06 Recognize the warning signs of personal stress and discuss the strategies and resources available for EMTs to utilize.
	03.07 Demonstrate good body mechanics while using a stretcher and other patient moving devices.
	03.08 Discuss the guidelines and safety precautions to be followed when lifting and moving patients and equipment.
	03.09 Discuss patient positioning in common emergency situations.
	03.10 Discuss situation that may require the use of medical restraints on the patient and explain guidelines and safety consideration for their use.
	03.11 Define “infectious disease” and “communicable disease.”
	03.12 Describe the routes of transmission and associated risks for infectious disease.
	03.13 Disease transmission (F, F).
	03.14 Explain the mode of transmission and the steps to prevent/deal with an exposure of hepatitis, meningitis, tuberculosis and HIV.
	03.15 Explain how immunity to infectious diseases is acquired.

	03.16 Explain post exposure management of exposure to patient blood or body fluids, including proper notification documentation.
	03.17 Describe the components of physical fitness and mental wellbeing.
	03.18 Identify personal health practices and environmental factors which affect physical, mental, and emotional wellbeing.
	03.19 Prevention of work-related injuries and illnesses (F, F).
	03.20 Responder mental health, resilience and suicide prevention (F, F).
	03.21 Wellness principles (F, F).
	03.22 Discuss complementary and alternative health practices.
	03.23 Explain the basic concepts of positive self-image, wellness and stress.
	03.24 Discuss the need for a wellness and stress control plan that can be used in personal and professional life.
	03.25 Explore the importance of adequate nutrition (i.e., U.S. Department of Agriculture's MyPlate food guide (www.choosemyplate.gov)).
	03.26 Demonstrate safe behaviors in the proper use of medical equipment.
	03.27 Explain the theory of root- cause analysis.
	03.28 Identify and describe methods in medical error reduction and prevention in the various healthcare settings.
	03.29 Identify and practice security procedures for medical supplies and equipment in the various healthcare settings.
	03.30 Describe fire, safety, disaster and evacuation procedures in the various healthcare settings.
	03.31 Discuss applicable accrediting and regulatory agency patient safety guidelines.
04.0	**Documentation:** Demonstrate a fundamental depth, foundational breadth of knowledge of the principles of medical documentation and report writing. The student will be able to:
	04.01 Discuss applications of technology in healthcare.
	04.02 Demonstrate basic computer skills.
	04.03 Interpret and utilize information from electronic health records.
	04.04 Identify methods of electronic communication to access and distribute data.
	04.05 Describe the use and importance of properly written communication and patient care documentation.
	04.06 Explain the legal implication of the patient care report.
	04.07 Supporting medical necessity (S, S).
	04.08 Identify the minimum dataset reference patient information and administrative information on the patient care report.
	04.09 Understand how to document refusal of care, including legal implications.
	04.10 Discuss the implications of the Health Insurance Portability and Accountability Act of 1996 on confidential documentation.

	04.11 Describe the special considerations concerning mass casualty incident documentation.
	04.12 Demonstrate completion of a patient care report for a medical and trauma patient.
05.0	**EMS System Communication:** Demonstrate a simple depth, simple breadth of knowledge of the EMS communication system, communication with other health care professionals, and team communication. The student will be able to:
	05.01 Understand the basic principles of the various types of communications equipment used in EMS.
	05.02 Describe the use of radio communication and correct radio procedures, including the proper methods of initiating and terminating the radio call/transmission.
	05.03 Explain the rationale for providing efficient and effective radio communications and patient reports.
	05.04 Identify the essential components of the verbal report and legal aspects that need to be considered.
	05.05 Perform an organized and concise radio transmission.
	05.06 Team communication and dynamics (S, S).
	05.07 Perform an organized, concise verbal patient report that would be given to the staff at a receiving facility.
	05.08 Perform a brief, organized verbal report that would be given during transfer of care at an incident scene.
06.0	**Therapeutic Communication:** Demonstrate a simple depth, simple breadth of knowledge of the principles of therapeutic communication. The student will be able to:
	06.01 Describe principles of therapeutic and effective communication with patients.
	06.02 Health care literacy (S, S).
	06.03 Non-discriminatory communication that addresses inherent or unconscious bias, is culturally aware and sensitive, and intended to improve patient outcome (S, S).
	06.04 Discuss basic speaking and active listening skills.
	06.05 Recognize the importance of patient/client educations regarding healthcare.
	06.06 Discuss the adjustment of communication strategies to effectively communicate with patients with: • Differing age groups • Differing developmental stages • Special needs • Differing cultures, including language barriers
	06.07 Discuss the communication techniques that should be used to interact with the patient, patient family, bystanders, and individuals from other agencies including verbal diffusion and interview techniques.
	06.08 Discuss the strategies for interviewing persons in special situations.
	06.09 Distinguish between and respond to verbal and non-verbal cues.
	06.10 Analyze elements of communication using a sender-receiver/close loop model.
	06.11 Exhibit positive non-verbal behaviors.

	06.12 Establish proper patient rapport.
07.0	**Medical/Legal and Ethics:** Demonstrate a fundamental depth, foundational breadth of knowledge of medical legality and ethics. The student will be able to:
	07.01 Discuss the rational, importance, and limitations of patient autonomy.
	07.02 Differentiate between expressed, implied and involuntary consent.
	07.03 Discuss the methods of obtaining consent and procedures for minors.
	07.04 Discuss the issues of abandonment, negligence, false imprisonment and battery and their implications to the EMT.
	07.05 Discuss the implications for the EMT in patient refusal of care and/or transport.
	07.06 Explain the importance, necessity and legality of patient confidentiality.
	07.07 Discuss the importance of Do Not Resuscitate [DNR] (advance directives) and local or Florida provisions regarding EMS application.
	07.08 Patient rights/advocacy (S, S).
	07.09 Discuss State of Florida and Federal special reporting situations including: • Abuse • Sexual assault • Gunshot and knife wounds • Communicable disease • Animal Bites
	07.10 Differentiate between civil tort and criminal actions.
	07.11 Discuss the elements of negligence and defenses/protections from liability.
	07.12 Discuss the role of the EMT at crime scenes and preservation of evidence.
	07.13 Define ethics and morality and discuss their implication for the EMT.
	07.14 Discuss Florida legislation such as: • Baker Act (394.451, F.S.) • Marchman Act (397.601, F.S. and 397.675, F.S.) • Emergency Examination and Treatment of Incapacitated Persons Act (401.445, F.S.)
	07.15 Differentiate between the scope of practice and the standard of care as applied to the EMT.
	07.16 Discuss the legal concepts and limitations of immunity, including Good Samaritan statutes and governmental immunity.
	07.17 Describe the appropriate patient management and care techniques in a refusal of care situation.
	07.18 Analyze the relationship between the law, morals and ethics in EMS and the premise that should under lie the EMTs ethical decisions.
	07.19 Describe the criteria necessary to honor an advance directive.

	07.20 Explain the rationale for the needs, benefits and varying degrees of advance directives.
08.0	**Anatomy and Physiology**: Demonstrate a fundamental knowledge of the anatomy and function of all human systems to the practice of EMS. The student will be able to:
	08.01 Identify the following topographic terms: • Medial • Lateral • Proximal • Distal • Superior • Inferior • Anterior • Posterior • Midline • Right and left • Mid-clavicular • Bilateral • Mid-axillary
	08.02 Describe the life support chain, aerobic metabolism, and anaerobic metabolism.
	08.03 Define anatomy, physiology, pathophysiology, and homeostasis.
	08.04 Identify and describe the anatomical structures and functions of the following: • Skeletal system • Muscular system • Respiratory System • Circulatory/ Cardiovascular system • Nervous System • Integumentary system • Digestive system • Endocrine system • Renal system • Reproductive system • Lymphatic System
	08.05 Explain cellular anatomy and physiology.
	08.06 Explain cellular respiration.
	08.07 Discuss cell division.
	08.08 Describe the different types of muscle tissues including skeletal, smooth and cardiac.

	08.09 Name and identify the location of the bones of the axial and appendicular skeleton.
	08.10 Describe the classification and types of joints.
	08.11 Discuss the mechanisms of breathing including: • Mechanical ventilation • Pulmonary volumes • Dead space • Lung compliance
	08.12 Explain the diffusion of gases in external and internal respiration.
	08.13 Describe oxygen and carbon dioxide transport in the blood.
	08.14 Describe nervous and chemical mechanisms that regulate respirations.
	08.15 Discuss respiration and acid-base balance.
	08.16 Discuss the hemodynamics of blood pressure.
	08.17 Discuss the role of nutrition, metabolism and body temperature on body function.
	08.18 Describe the causes, advantages and disadvantages of a fever.
	08.19 Discuss the hypothalamus functions as the thermostat in the body.
09.0	**Medical Terminology:** Demonstrate a fundamental knowledge in the use of medical terminology. The student will be able to:
	09.01 Identify medical terminology word parts such as: • Root words • Prefixes • Suffixes • Combining forms
	09.02 Correctly utilize medical terminology describing each of the following: • Body structures • Functions • Conditions and disorders • Body regions • Cavities • Areas • Landmarks
	09.03 Correctly use medical abbreviations and symbols.
	09.04 Read and understand basic medical documentation in medical records and medical reports.
	09.05 Communicate with healthcare professionals utilizing basic medical terminology.

	09.06 Explain the rationale for using accepted medical terminology correctly.
10.0	**Pathophysiology:** Demonstrate a fundamental knowledge of the causes and pathophysiology of shock and the components of resuscitation. The student will be able to:
	10.01 Discuss signs of irreversible death.
	10.02 Review the anatomy and physiology of the respiratory and cardiovascular systems.
	10.03 Discuss and identify the pathophysiology of respiratory failure and respiratory and cardiac arrest.
	10.04 Understand shock, including the pathophysiology, causes, and the signs and symptoms associated with the various types of shock.
	10.05 Discuss the variations in the pathophysiology of shock patients of all ages.
11.0	**Life Span Development:** Demonstrate a fundamental knowledge of life span development to patient assessment and management. The student will be able to:
	11.01 Describe the major physiologic and psychosocial characteristics patients of all ages.
12.0	**Public Health:** Demonstrate a simple knowledge of the principles of illness and injury prevention in emergency care. The student will be able to:
	12.01 Define public health and explain the goal of the public health field.
	12.02 Identify the EMS role within the public health field.
	12.03 Discuss basic concepts of epidemiology.
	12.04 Discuss ways of EMS involvement in injury prevention.
	12.05 Identify areas of need for prevention programs in the community.
13.0	**Principles of Pharmacology:** Demonstrate a simple depth, simple breadth of knowledge of pharmacology, medication safety, and medication types used during an emergency. The student will be able to:
	13.01 Explain the “rights” of medication administration and describe how each one related to EMS.
	13.02 Discuss and differentiate the various medication forms and the appropriate routes of administration
	13.03 Describe the difference between a generic medication name and trade name and provide an example of each.
	13.04 Specific medication classes to be determined locally • Class names (S, S) • Class indications (S, S) • Class complications (S, S) • Class side effects (S, S)
	13.05 Polypharmacy (S, S)
	13.06 Discuss the components and elements of a drug profile including: • Class • Actions

	• Contraindications • Side effects • Dose • Route • Adverse drug reactions (S, S) • Medication response relationships (F, F)
13.07	Describe the role of medical direction in medication administration and explain the difference between direct orders (online) and standing orders (off-line).
14.0	**Pharmacology Medications:** Demonstrate a fundamental depth, simple breadth of knowledge of emergency medications within the scope of practice of the EMT. The student will be able to:
14.01	Discuss the forms in which the medications may be found. (Principles of Pharmacology) • Medication safety • Medication legislation • Naming • Classifications • Storage and security • Medication interactions • Adverse drug reactions • Metabolism and excretion • Mechanism of action • Medication response relationships
14.02	State the following for each medication that can be administered by an EMT as dictated by the State of Florida and local medical direction: (Acute Medications): • Generic/ Trade names, Drug Classifications • Effects • Actions • Indication • Contraindications • Complications • Routes of administration • Side effects • Interactions • Doses of medications
14.03	Demonstrate the steps in properly inspecting each type of medication. (Medication Administration) • Use a Medication Cross Check procedure • Use an autoinjector • Use a unit-dose, premeasured intranasal device • Administer medications to a patient

	• Provide pain management, including ethical and safety considerations • Routes of administration
14.04	Discuss the difference between administration versus assistance of patient medications. (Chronic or Maintenance Medications) • Class names • Class indications • Class complications • Class side effects • Polypharmacy
15.0	**Respirations:** Demonstrate a fundamental depth, foundational breadth of knowledge of respiration. The student will be able to:
15.01	Anatomy of the Respiratory System and review the pulmonary ventilation process to include mechanics of ventilation and alveolar ventilation (tidal volumes, dead space, etc.): • Control of respirations • Mechanics of respiration • Pulmonary ventilation • Oxygenation • Mechanical ventilation
15.02	Physiology and pathophysiology of respiration • Pulmonary ventilation • Oxygenation • Respiration • External • Internal • Cellular
15.03	Demonstrate the correct operation of oxygen tanks and regulators.
15.04	Describe the following regarding supplemental oxygen delivery devices: • Indications • Contraindications • Advantages • Disadvantages • Complications • Liter flow range • Concentration of delivered oxygen • Procedures • Purpose • Components
15.05	Demonstrate the use of low, medium, high, and variable concentration oxygen delivery devices for all age groups.

	15.06 Describe assessment and management for adequate and inadequate respiration, including the use of pulse oximetry and capnography
	15.07 Explain the rationale for providing adequate oxygenation through high inspired oxygen concentrations to patients who, in the past, may have received low concentrations.
	15.08 Discuss the use of an oxygen humidifier and the requirements needed for its use.
	15.09 Discuss the differences between negative pressure and positive pressure ventilation.
16.0	**Airway Management:** Demonstrate a fundamental depth, foundational breadth of knowledge of airway management, patients of all ages within the scope of practice of the EMT. The student will be able to:
	16.01 Review the structures and functions of the respiratory system of the Anatomy of the Airway and the Respiratory System (Include age-related variation in pediatric and geriatric patients). • Normal • Abnormal • Special Considerations (MDI, In-Line Neb, Simple Face Mask, Venturi, CPAP/BiPAP)
	16.02 Describe appropriate assessment of the airway and the management for a patient with or without adequate breathing (Include age-related variations in pediatric and geriatric patients).
	16.03 Describe the Techniques of assuring a patent airway, indications for airway management, and demonstrate the steps in performing the head-tilt chin-lift and jaw thrust in patients of all ages (Include age- related variations in pediatric and geriatric patients). • Demonstrate the techniques of suctioning. • Demonstrate relief of FBAO. • Demonstrate how to insert an oral and nasal -airway adjunct. • Demonstrate how to insert both esophageal and supra-glottic airways.
17.0	**Artificial Ventilations:** Demonstrate a fundamental depth, foundational breadth of knowledge of assessment and management utilizing ventilation patients of all ages. The student will be able to:
	17.01 Effect of ventilation on cardiac output • E.g., Bag Valve Mask, Ventilator, CPAP, Hyper Mechanical Inflation …
	17.02 Demonstrate how to ventilate a patient with a pocket mask.
	17.03 Demonstrate the safe and effective ventilation for a patient with a BVM for one or two rescuers using oral-nasal adjuncts with appropriate airway positioning.
	17.04 Discuss the signs of adequate and inadequate ventilation using the BVM.
	17.05 Describe the steps involved in performing a comprehensive assessment of ventilations.
	17.06 Demonstrate how to ventilate a patient with a stoma.
	17.07 Demonstrate the use of various devices used in the assessment of supra-glottic airway placement.
	17.08 Describe the following for a patient with an automatic transport ventilator (ATV): • Indications • Contraindications • Advantages

	• Disadvantages • Complications • Technique for ventilating
	17.09 Describe the following for a patient with a CPAP: • Indications • Contraindications • Advantages • Disadvantages • Complications • Technique for ventilating
18.0	**Scene Size-Up:** Demonstrate a fundamental depth, foundational breadth of knowledge of scene management and multiple patient situations**.** The student will be able to:
	18.01 Recognize and describe hazards/potential hazards at the scene.
	18.02 Discuss common mechanisms of injury/nature of illness.
	18.03 Discuss the priority considerations for multiple-patient situations.
	18.04 Explain why it is important for the EMT to anticipate and determine the need of appropriate Scene management including but not limited to traffic incident management, additional resources, or specialty resources.
	18.05 Discuss the importance of continuous scene assessment to ensure safety of the EMS Impact of the environment on team and the patient care.
	18.06 Explain why it is important for the EMT to anticipate and determine the need for additional or specialized resources.
	18.07 Discuss the importance of continuous scene assessment to ensure safety of the EMS team and the patient.
	18.08 Discuss the minimum standard precautions that should be followed and PPE that should be worn as appropriate.
	18.09 Discuss special considerations for dealing with a violent scene.
	18.10 Explain the rationale for crew members to evaluate scene safety prior to entering.
	18.11 Explain how patient situations affect your evaluation of mechanism of injury or illness.
19.0	**Primary Assessment:** Demonstrate a fundamental depth, simple breadth of knowledge of the primary assessment for all patient situations. The student will be able to:
	19.01 Summarize the elements of a general impression of the patient.
	19.02 Explain the reason for performing a primary assessment.
	19.03 Discuss and demonstrate methods of assessing level of responsiveness using AVPU.
	19.04 Discuss and demonstrate methods of assessing the airway and providing airway care patients of all ages.
	19.05 Describe and demonstrate methods used for assessing if a patient is breathing patients of all ages.

	19.06 Differentiate between a patient with adequate and inadequate breathing.
	19.07 Describe and demonstrate the methods used to obtain a pulse patient of all ages.
	19.08 Discuss and demonstrate assessing the patient for external bleeding.
	19.09 Describe and demonstrate the assessment and interpretation of skin color, temperature, moisture and capillary refill patients of all ages.
	19.10 Explain the reasons prioritizing a patient for care and transport.
	19.11 Describe when it is appropriate to expose the patient completely.
	19.12 Differentiate between critical life-threatening, potentially life- threatening, and non-life-threatening patient presentations.
20.0	**History-Taking:** Demonstrate a fundamental depth, foundational breadth of knowledge of the components of history taking. The student will be able to:
	20.01 Determine and investigate the chief complaint (MOI/NOI).
	20.02 Describe components of the patient history.
	20.03 Explain the importance of obtaining a SAMPLE and OPQRST history.
	20.04 Acknowledge the feelings patients experience during assessment.
	20.05 Discuss the value of obtaining a family and social history.
	20.06 Describe examples of different techniques the EMT may use to obtain information from patients, family or bystanders during the history taking process.
21.0	**Secondary Assessment:** Demonstrate a fundamental depth, foundational breadth of knowledge of techniques used for a secondary assessment. The student will be able to:
	21.01 Discuss the components and techniques of the physical exam and skills involved.
	21.02 Discuss the indications for performing: • Rapid assessment • Focused exam • Head to toe exam
	21.03 Demonstrate: • Rapid exam • Focused exam • Head to toe exam
	21.04 Describe and demonstrate the techniques of inspection, palpation, percussion, and auscultation. • Respiratory system including breath sound quality • Cardiovascular system • Neurological system • Musculoskeletal system • Major anatomical regions

	21.05 Describe and demonstrate the importance of obtaining a baseline set of vital signs. • E.g., Non-Invasive Blood Pressure, Blood Glucose, Temperature.
	21.06 Discuss blood pressure ranges across patients of all ages.
22.0	**Monitoring Devices:** Demonstrate a simple depth, simple breath of knowledge of monitoring devices within the scope of practice of the EMT. The student will be able to:
	22.01 Describe and demonstrate the purpose, indications, procedure, normal findings, and limitations of the following patient monitoring technologies. • Pulse oximetry • Glucometry • Capnography • Noninvasive BP monitoring • Thermometry • Cardiac monitoring – 12 lead ECG acquisition and Transmission
23.0	**Reassessment:** Demonstrate a fundamental depth, foundational breadth of knowledge of how and when to perform a reassessment for all patient situations. The student will be able to:
	23.01 Describe the components of reassessment and demonstrate the skills involved.
	23.02 Discuss the reasons for repeating the primary assessment as part of the reassessment.
	23.03 Explain trending assessment components and its value to other health professionals who assume care of the patient.
	23.04 Demonstrate the reassessment of patients of all ages.
24.0	**Medical Overview:** Demonstrate a simple depth, foundation breadth of knowledge of pathophysiology, assessment and management of medical complaints. The student will be able to:
	24.01 Identify factors that complicate patient assessment: • Identify factors that affect the patient Transport Decision and Medically Appropriate Destination • E.g. Scene Safety, Environmental Factors, Chief Complaint, Preconceptions …
	24.02 Discuss forming a field impression and utilizing available information to determine a differential diagnosis.
25.0	**Neurology:** Demonstrate a fundamental depth, foundational breadth of knowledge of the assessment and management of neurologic disorders/emergencies patients of all ages. The student will be able to:
	25.01 Review the anatomy and physiology of the nervous system.
	25.02 Describe the pathophysiology of the following neurologic disorders: • Altered Mental Status/Decreased Level of Responsiveness (Possible Differential Diagnosis) • Stroke (Hemorrhagic, Occlusive, Transient Ischemic Attack) • Headache • Seizures • Syncope • Dementia vs. delirium • Alzheimer's disease

		• Headache • Brief Resolved Unexplained Event (BRUE) • Other neurological disorders to be determined locally
	25.03	Discuss and identify the causes, signs and symptoms of ischemic strokes, hemorrhagic strokes, and transient ischemic attacks and their similarities and differences.
	25.04	Discuss and demonstrate how to use a stroke scoring system in the assessment of patients with suspected stroke.
	25.05	Define and differentiate generalize seizure, partial seizure and status epilepticus and list their possible causes.
	25.06	Define and differentiate migraine headache, sinus headache, tension headache and discuss how to distinguish harmless headaches from something more serious.
	25.07	Define “altered mental status” and identify the possible causes.
	25.08	Describe and demonstrate the assessment and management of the patient with various neurological emergencies in patients of all ages to include: • Strokes • Headaches • Seizures • Altered mental status
	25.09	Discuss the transport of the stroke patient to the appropriate treatment center.
26.0	**Abdominal and Gastrointestinal Disorder:** Demonstrate a fundamental depth, foundational breadth of knowledge of the assessment and management of abdominal and gastrointestinal disorders/emergencies patients of all ages. The student will be able to:	
	26.01	Review the basic anatomy and physiology the gastrointestinal, genital and urinary systems.
	26.02	Define and describe the pathophysiology of the following abdominal and gastrointestinal disorders: • Abdominal pain • Acute abdomen • Peritonitis • Appendicitis • Pancreatitis • Cholecystitis • Gastrointestinal bleeding • Esophageal varices • Gastroenteritis • Ulcers • Intestinal obstruction • Hernia • Abdominal aortic aneurysm
	26.03	Identify the signs and symptoms of common GI disorders.
	26.04	Describe and demonstrate the assessment and management of the patient with various gastrointestinal emergencies.

	26.05 Differentiate between hemorrhagic and non-hemorrhagic abdominal pain.
27.0	**Immunology:** Demonstrate a fundamental depth, foundational breadth of knowledge of the assessment and management of immunology disorders/emergencies, patients of all ages. The student will be able to:
	27.01 Define and differentiate allergic reaction and anaphylaxis.
	27.02 Describe the pathophysiology of the following immunology disorders: • Allergic reaction • Anaphylaxis • Anaphylactic shock
	27.03 Describe and demonstrate the assessment and management of the patients of all ages experiencing an allergic or anaphylactic reaction.
	27.04 Review the following for the epinephrine auto-injector: • Generic and trade names • Medication forms • Dose • Administration • Action • Contraindications
	27.05 Demonstrate the use of epinephrine auto-injector.
	27.06 Review the anatomy and physiology of the organs and structures related to anaphylaxis.
	27.07 Describe the incidence, morbidity and mortality of anaphylaxis.
	27.08 Recognize the signs and symptoms related to anaphylaxis.
	27.09 Describe the risk factors for and prevention of anaphylaxis and appropriate patient education.
	27.10 Discuss common antigens most frequently associated with anaphylaxis.
	27.11 Explain the importance of separating the patient from the allergen when possible.
28.0	**Infectious Disease:** Demonstrate a simple depth, simple breadth of knowledge of the assessment and management of a patient who may have an infectious disease patients of all ages. The student will be able to:
	28.01 Discuss the causes of infectious diseases
	28.02 Describe the pathophysiology of infectious diseases of significant public health concern.
	28.03 Describe and demonstrate the assessment and management of the patient in all age groups experiencing an infectious disease.
	28.04 Discuss mandatory notification to State or Federal agencies of various diseases.
	28.05 Identify patients with risk factors for infectious disease.
	28.06 Explain the principles and practices of infection control in prehospital care.

	28.07	Describe and discuss the rationale for the various types of PPE.
	28.08	Discuss the proper disposal of contaminated supplies (sharps, gauze sponges, tourniquets, etc.).
	28.09	Discuss decontamination of the ambulance and disinfection of patient care equipment, and areas in which care of the patient occurred.
	28.10	Describe the actions to take if the EMS provider is exposed to an infectious disease.
	28.11	Demonstrate the ability to comply with body substance isolation guidelines.
	28.12	Discuss the pathophysiology, risk factors, assessment, and prehospital management of sepsis/systemic inflammatory response syndrome (SIRS)
	28.13	Identify the signs and symptoms and discuss the assessment and prehospital management of a patient in septic shock.
	28.14	Describe the risk factors and prevention of infectious disease and appropriate patient education (Including but not limited to handwashing, PPE use, and disposal on contaminated supplies).
29.0	**Endocrine Disorders:** Demonstrate a fundamental depth, foundational breadth of knowledge of the assessment and management of endocrine disorders/emergencies, patients of all ages. The student will be able to:	
	29.01	Review the anatomy and physiology of the endocrine system and its main function in the body.
	29.02	Describe the pathophysiology and signs and symptoms of the following endocrine disorders: • Insulin Dependent Diabetes Mellitus • Non-Insulin Dependent Diabetes Mellitus • Hypoglycemia • Hyperglycemia • Diabetic Ketoacidosis (DKA) • Hyperglycemic Hyperosmolar Non-ketotic Syndrome (HHNS)
	29.03	Define and differentiate between Type I and Type II Diabetes.
	29.04	Identify and demonstrate the steps in the management of the patient taking diabetic medicine with an altered mental status and a history of diabetes. Patients of all ages..
	29.05	Review the following for oral glucose: • Generic and trade names • Medication forms • Dose • Administration • Action • Contraindications
	29.06	Demonstrate the steps of using a glucometer device and administering oral glucose.
	29.07	Describe and demonstrate the assessment and the management of the patient experiencing an endocrinologic emergency to include hypo- and hyper-glycemia.

	29.08 Discuss the general assessment findings associated with endocrinologic emergencies.
	29.09 Describe the risk factors for and prevention of endocrine emergencies, including but not limited to healthy lifestyles and modifiable risk factors, the use of blood sugar monitoring devices and self- administration of prescribed medications.
30.0	**Psychiatric:** Demonstrate a fundamental depth, foundational breadth of knowledge regarding the assessment and management of psychiatric emergencies patients of all ages. The student will be able to:
	30.01 Differentiate among behavior, psychiatric disorders and behavioral emergencies
	30.02 Discuss common psychiatric disorders and behavioral emergencies.
	30.03 Discuss the general factors that may cause an alteration in a patient's behavior.
	30.04 Discuss patterns of violence, abuse, and neglect.
	30.05 Discuss the risk factors/signs or symptoms of various psychiatric emergencies to include acute psychosis, suicide ideation, excited delirium, anxiety, depression, medical fear, substance use disorder, and PTSD.
	30.06 Manage a behavioral emergency scenario applying knowledge of medical/legal Florida Statutes.
	30.07 Describe and demonstrate the assessment and management of the patient experiencing a behavioral or psychiatric emergency.
	30.08 Discuss the role of the National Suicide and Crisis Lifeline (988) in the United States.
	30.09 Demonstrate an understanding of appropriate and available mental health resources and provide patient education.
	30.10 Describe and demonstrate the assessment and management of the patient experiencing a behavioral or psychiatric emergency across patients of all ages.
	30.11 Describe the biological, psychosocial, and sociocultural influences on psychiatric disorders.
	30.12 Describe the special considerations for the safety of the EMS provider and EMS crew, the patient and bystanders when dealing with behavioral and psychiatric emergencies.
	30.13 Describe and demonstrate methods of restraint that may be used in the management of a patient with a behavioral emergency.
	30.14 Explain the importance of provider behavior and communication in the care of a patient with a behavioral emergency.
31.0	**Cardiovascular**: Demonstrate a fundamental depth, foundational breadth of knowledge of the assessment and management of cardiovascular emergencies, patients of all ages. The student will be able to:
	31.01 Review the basic anatomy and physiology of the cardiovascular system.
	31.02 Describe the pathophysiology and signs and symptoms of the following cardiovascular disorders: • Acute coronary syndrome • Angina pectoris • Thromboembolism • Myocardial infarction • Hypertensive emergencies • Aortic aneurysm/dissection • Left and right sided heart failure

	• Cardiogenic shock • Cardiac arrest
31.03	Describe and demonstrate the assessment and management of the patient experiencing a cardiac emergency. Across patients of all ages.
31.04	Discuss the indications and contraindications for automated external defibrillation (AED). 9including automatic, manual and vest type).
31.05	Explain the impact of age and weight on defibrillation.
31.06	Discuss the position of comfort for patients with various cardiac emergencies.
31.07	Explain the rationale for early defibrillation.
31.08	Discuss and differentiate among various types of external defibrillators.
31.09	Discuss and differentiate among the various types of implanted cardiac devices.
31.10	Understand the importance of maintenance and operators check list for AED's.
31.11	Demonstrate the ability to use an AED according to the latest American Heart Association (AHA) guidelines.
31.12	Explain the role medical direction plays in the use of automated external defibrillation.
31.13	Explain the rationale for administering nitroglycerin oxygen and ASA to a patient with chest pain or discomfort.
31.14	Demonstrate the assessment and documentation of patient response to the automated external defibrillator.
31.15	Demonstrate the assessment and documentation of patient response to nitroglycerin.
31.16	Discuss the purpose and use of CPR assist devices.
31.17	Describe the risk factors for and prevention of cardiac related diseases and provide appropriate patient education.
31.18	Discuss the signs and symptoms of acute coronary syndrome and provide appropriate patient education to include self-administration of prescribed medications.
32.0	**Toxicology:** Demonstrate a fundamental depth, foundational breadth of knowledge of the assessment and management of toxicological (poisoning and overdose) emergencies patients of all ages. The student will be able to:
32.01	Define and differentiate among toxicology, poisoning, and overdose.
32.02	Describe the pathophysiology and signs and symptoms of the following toxicological emergencies, including but not limited to: • Food poisoning • Carbon monoxide poisoning • Cyanide poisoning • Exposure to acid or alkaline substances • Exposure to hydrocarbons • Methanol ingestion • Isopropanol ingestion • Ethylene glycol ingestion

	• Exposure to poisonous plants • Drug withdrawal • Alcoholic syndrome • Withdrawal syndrome (including delirium tremens) • Illicit drug use • Medication overdose • Opioid overdose • Organa phosphate overdose • Nerve agents
32.03	Discuss various ways that toxins enter the body, (including inhalation, ingestion, injection, and absorption).
32.04	Discuss and demonstrate the assessment and management for the patient with a toxicological emergency.
32.05	Discuss the role of the Poison Control Center with the nationwide contact number 800-222-1222 in the United States.
32.06	Explain the rationale for contacting medical direction early in the prehospital management of a patient with a toxicological emergency.
32.07	Review the following for Narcan (naloxone): • Generic and trade names • Medication forms • Dose • Administration • Action • Contraindications
32.08	Discuss the use of medication assisted treatments for substance misuse disorders including suboxone, methadone, and naltrexone and potential complications.
32.09	Discuss safe uses and practices with potentially toxic substances while providing appropriate patient education.
33.0	**Respiratory:** Demonstrate a fundamental depth, foundational breadth of knowledge of the assessment and management of respiratory disorders/emergencies for patients of all ages. The student will be able to:
33.01	Review the basic anatomy and physiology of the respiratory system.
33.02	Describe the pathophysiology and signs and symptoms of the following respiratory disorders: • Chronic Obstructive Pulmonary Disease • Asthma • Bronchiolitis • Pulmonary Edema • Spontaneous Pneumothorax • Hyperventilation Syndrome • Cystic Fibrosis • Pulmonary Embolism

	• Pneumonia • Viral Respiratory Infections • Poisonous Exposures • Bacterial respiratory infections
33.03	Discuss signs of adequate air exchange.
33.04	Discuss the signs and symptoms of a patient across the continuum from respiratory distress to failure.
33.05	Describe and demonstrate the assessment and management of the patient with a respiratory emergency. Patients of all ages.
33.06	Review the following for the metered-dose inhalers and small volume nebulizers for medications within the scope of practice of the EMT: • Generic name • Medication forms • Mose • Administration • Action • Indications • Contraindications
33.07	Describe and demonstrate the steps in facilitating the use of an inhaler and a small volume nebulizer.
33.08	Differentiate between upper and lower airway obstruction.
33.09	Demonstrate assessment and interpretation of normal and abnormal lung and breath sounds.
33.10	Discuss common respiratory disorders, self-administered medications, and equipment (including, but not limited to: home oxygen, nebulizers, and CPAP) and provide appropriate patient education.
34.0	**Hematology:** Demonstrate a simple depth, simple breadth of knowledge of the assessment, and management of hematology disorders patients of all ages. The student will be able to:
34.01	Review the compositions and functions of blood and plasma.
34.02	Describe the pathophysiology of the following hematology disorders: • Anemia • Sickle Cell Anemia / Sickle Cell Crisis • Hemophilia/Clotting Disorders
34.03	Describe and demonstrate the assessment and the management of the patient with a hematological disorder. Across patients of all ages.
34.04	Discuss signs, symptoms, and potential complications of various hematological disorders and provide appropriate patient education
35.0	**Genitourinary/Renal:** Demonstrate a simple depth, simple breath of knowledge of the assessment and management of genitourinary/ renal emergency, patients of all ages. The student will be able to:
35.01	Review the basic anatomy and physiology of the genitourinary and renal systems.

	35.02 Describe the pathophysiology and signs and symptoms of the following genitourinary/ renal disorders: • Urinary tract infection • Kidney stones • Kidney failure
	35.03 Discuss the basic principles and complications of kidney dialysis.
	35.04 Discuss the recognition and complications of urinary catheters.
	35.05 Describe and demonstrate the assessment and management of the patient with a dialysis emergency. Across patients of all ages.
	35.06 Discuss traumatic injuries to the genitourinary system, including, but not limited to: sexual assault (female and male).
36.0	**Gynecology:** Demonstrate a fundamental depth, foundational breadth of knowledge of the assessment and management of gynecologic emergencies, patients of all ages The student will be able to:
	36.01 Review the basic anatomy and physiology of the female reproductive system.
	36.02 Describe the pathophysiology and signs and symptoms of the following gynecologic disorders and emergencies, including but not limited to: • Sexual assault • Non-traumatic vaginal bleeding • Menstrual pain • Ovarian cyst • Endometritis • Endometriosis • Pelvic inflammatory disease • Sexually Transmitted Disease
	36.03 Describe and demonstrate the assessment and management of the patient experiencing a gynecologic emergency. Across patients of all ages.
	36.04 Describe the assessment and management of a patient who has experienced a sexual assault including the psychosocial impact and assessment findings/presentations.
	36.05 Discuss the professional and psychological importance of maintaining a patient's modesty and privacy while still being able to obtain necessary information.
	36.06 Discuss the need to provide care for a patient of sexual assault, while still preventing destruction of crime scene information.
37.0	**Non-Traumatic Musculoskeletal Disorders:** Demonstrate a fundamental depth, foundational breadth of knowledge of the assessment and management of non-traumatic fractures, patients of all ages. The student will be able to:
	37.01 Review the basic anatomy and physiology of the musculoskeletal system.
	37.02 Describe and demonstrate the assessment and management of the patient in patients of all ages with a non-traumatic musculoskeletal emergency.
38.0	**Diseases of the Eyes, Ears, Nose, and Throat:** Demonstrate a simple depth, simple breadth of knowledge of assessment and management of diseases of the eyes, ears, nose, and throat, patients of all ages. The student will be able to:

	38.01	Describe and demonstrate the assessment and management of the patients in all ages with abnormal conditions affecting the eyes, ears, nose and throat, including epistaxis.
39.0	**Shock and Resuscitation:** Demonstrate a fundamental knowledge of the causes, pathophysiology, and management of shock and respiratory failure, patients of all ages. The student will be able to:	
	39.01	Discuss and identify causes and pathophysiology of the categories of hemorrhage and shock.
	39.02	Review causes and pathophysiology of respiratory failure and arrest.
	39.03	Review causes and pathophysiology of cardiac failure or arrest.
	39.04	Discuss the various types and degrees of shock.
	39.05	Discuss post resuscitation management.
	39.06	Explain the system components of CPR, the links in the AHA chain of survival and how each relates to patient survival.
	39.07	Define and differentiate between compensated and decompensated shock.
	39.08	Discuss the importance of teamwork in the successful management of the critical patient.
	39.09	Demonstrate how to perform one and two rescuer CPR, adult, child, and infant.
	39.10	Demonstrate how to perform rescuer level appropriate defibrillation in an adult, child, and infant patient.
	39.11	Demonstrate rapid decision making based on differential field diagnosis of the critical patient with a special arrest peri-arrest condition.
	39.12	Describe and demonstrate the assessment and management of the patient with hemorrhage and shock.
	39.13	Discuss ethical issues in resuscitation.
	39.14	Discuss options for termination resuscitation.
40.0	**Trauma Overview:** Demonstrate a fundamental depth, foundational breadth of knowledge of pathophysiology, assessment and management of the trauma, patients of all ages. The student will be able to:	
	40.01	Discuss pathophysiology of the trauma patient.
	40.02	Discuss the components of a comprehensive trauma systems and levels of trauma centers.
	40.03	Describe the considerations for different transportation modes, transport and destination issues to a trauma center.
	40.04	Discuss the kinematics of blunt and penetrating trauma.
	40.05	Discuss and describe significant and non-significant Mechanism of Injury (MOI) and provide examples of each.
	40.06	Demonstrate the application of the State of Florida's trauma scorecard methodologies as required in Florida Statute and Florida Administrative Code (F.A.C.).
	40.07	Discuss the National Trauma Triage Protocol of injured Patients.
	40.08	Discuss forming a field impression and utilizing available information to determine a differential diagnosis.

	40.09 Identify the need for rapid intervention transport of the trauma patient.
41.0	**Bleeding:** Demonstrate a fundamental depth, foundational breadth of knowledge of pathophysiology, assessment, and management of bleeding, patients of all ages. The student will be able to:
	41.01 Review the anatomy and physiology of the circulatory system.
	41.02 Discuss the different types of bleeding and classes of hemorrhage.
	41.03 Review signs and symptoms of shock (hypo-perfusion).
	41.04 Demonstrate effective hemorrhage control to include application of a tourniquet.
	41.05 Review the pathophysiology of hemorrhagic shock.
	41.06 Recognize the need for rapid transport for patients that are bleeding and showing signs of shock (hypo-perfusion).
	41.07 Describe and demonstrate the assessment and management of a patient with hemorrhagic shock.
	41.08 Discuss the possible complications of an improperly applied dressing, bandage, tourniquet, and hemostatic agents.
42.0	**Chest Trauma:** Demonstrate a fundamental depth, simple breadth of knowledge of pathophysiology, assessment and management of chest trauma, patients of all ages. The student will be able to:
	42.01 Review the anatomy and physiology of the thoracic/chest cavity and respiratory system.
	42.02 Differentiate between a pneumothorax (open, simple and tension) and hemothorax.
	42.03 Discuss the pathophysiology, signs and symptoms, and MOI of myocardial injuries, including the following: • Pericardial tamponade • Myocardial contusion • Myocardial rupture • Commotio cordis • Aortic sheerer
	42.04 Discuss the pathophysiology, signs and symptoms, and MOI of specific chest wall injuries, including the following: • Rib fracture • Flail segment • Sternal fracture • Open chest wound • Impaled object
	42.05 Describe and demonstrate the assessment and management of chest trauma, to include blunt versus penetrating trauma.
43.0	**Abdominal and Genitourinary Trauma:** Demonstrate a fundamental depth, simple breadth of knowledge of pathophysiology, assessment and management of abdominal and genitourinary trauma, patients of all ages. The student will be able to:
	43.01 Review the anatomy and physiology of the abdominal cavity and genitourinary system.
	43.02 Discuss the pathophysiology, signs and symptoms, and MOI for abdominal trauma including evisceration, impaled objects, blunt versus penetrating mechnaisms, hollow and solid organ injuries.

	43.03 Describe and demonstrate the assessment and management of a patient with a suspected abdominal or genitourinary injury/trauma, to include internal/external genitalia.
44.0	**Orthopedic Trauma:** Demonstrate a fundamental depth, foundational breadth of knowledge of pathophysiology, assessment, and management of orthopedic trauma, patients of all ages. The student will be able to:
	44.01 Review the anatomy and physiology of the musculo-skeletal system.
	44.02 Discuss pathophysiology, signs and symptoms, and MOI for orthopedic trauma.
	44.03 Discuss the different types of orthopedic trauma including fracture classifications to include: • Open fracture • Closed fracture • Dislocation • Upper and Lower extremity orthopedic trauma • Sprains and Strains • Pelvic Fracture
	44.04 Explain the rationale for stabilization of an injured extremity.
	44.05 Describe and demonstrate the assessment and management of a patient with a suspected orthopedic trauma.
	44.06 Discuss the following management techniques: • Heat therapy • Cold therapy • Splinting
	44.07 List the six “P’s” of orthopedic injury assessment.
	44.08 Discuss the need for assessment of distal pulses, motor, and sensation before and after splinting.
	44.09 Review age-associated changes in the bones.
	44.10 Discuss the proper procedures to package an amputated body part for replantation.
	44.11 Explain the rationale for splinting at the scene versus load and go.
	44.12 Demonstrate the proper use of various splinting materials and devices to include improvised and traction splints.
45.0	**Soft Tissue Trauma:** Demonstrate a fundamental depth, foundational breadth of knowledge of pathophysiology, assessment, and management of soft tissue trauma, patients of all ages. The student will be able to:
	45.01 Review anatomy and physiology of the integumentary system to include the layers of the skin.
	45.02 Describe the pathophysiology, signs and symptoms, and MOI of soft tissue trauma.
	45.03 Describe and demonstrate the assessment and management of various soft tissue injuries. • Wounds (e.g., avulsion, bite, laceration, puncture, and incisions) • Crush and compartment syndrome • High pressure injection injury

	45.04 Identify types of burn injuries, including: • Thermal burn • Chemical burn • Electrical burn • Radiation exposure
	45.05 Describe the depth classifications of burn injuries, including: • Superficial burn • Partial-thickness burn • Full-thickness burn • Other depth classifications
	45.06 Describe and demonstrate methods for determining body surface area percentage of a burn injury including the “rule of nines," the "rule of palms," and other methods.
	45.07 Explain how the seriousness of a burn is related to its depth and percent of body surface area (BSA) involved.
	45.08 Review the various management techniques for hemorrhage control.
	45.09 Differentiate among the types of injuries requiring the use of an occlusive versus non- occlusive dressing.
	45.10 Demonstrate the assessment and management of specific burn injuries including: • Thermal • Inhalation • Chemical (in the eye and on the skin) • Electrical • Radiation
46.0	**Head, Facial, Neck, and Spine Trauma:** Demonstrate a fundamental depth, foundational breadth of knowledge of pathophysiology, assessment, and management of head, facial, neck and spine trauma, patients of all ages. The student will be able to:
	46.01 Review the anatomy and physiology of the head, face, neck and spine.
	46.02 Describe the pathophysiology, signs and symptoms, and MOI for head, face, neck, and spine trauma.
	46.03 Describe and demonstrate the assessment and management of a patient with the following traumas to the head, face, neck, and spine: • Penetrating neck trauma • Laryngotracheal injury • Skull fracture • Facial fracture • Eye injury (foreign body) eyes, globe rupture. • Dental trauma • Shaken Baby Syndrome • Severe epistaxsis
	46.04 Recognize and manage life threats due to face, head, neck, and spine trauma.

	46.05 Discuss and demonstrate the utilization of the Glasgow Coma Scale.
47.0	**Nervous System Trauma:** Demonstrate a fundamental depth, foundational breadth of knowledge of pathophysiology, assessment, and management of nervous system trauma, patients of all ages. The student will be able to:
	47.01 Review the anatomy and physiology of the nervous system.
	47.02 Discuss the pathophysiology, signs and symptoms, and MOI for **traumatic** brain and **injury (TBI)** spinal cord trauma.
	47.03 Describe and demonstrate the assessment and management of a patient with a t**raumatic** brain **injury (TBI)** and/or spinal cord trauma.
	47.04 Discuss the rationale and potential complications of spinal motion restriction of the entire spine when a cervical spine injury is suspected.
	47.05 Given a scenario, discuss whether or not to remove a helmet prior to transport of a patient.
	47.06 Demonstrate various methods for stabilization and removal of a helmet.
	47.07 Discuss documentation of assessment before, during, and after spinal motion restriction.
48.0	**Special Considerations in Trauma:** Demonstrate a fundamental depth, foundational breadth of knowledge of pathophysiology, assessment and management of trauma patients with special considerations for patients of all ages. The student will be able to:
	48.01 Review the anatomy and physiology for the following trauma patients: • Pregnant • Pediatric • Geriatric
	48.02 Discuss the pathophysiology, signs and symptoms, and MOI of trauma in the following patients: • Pregnant • Pediatric • Geriatric
	48.03 Discuss and demonstrate unique assessment and management considerations for the following trauma patients: • Pregnant • Pediatric • Geriatric • Cognitively impaired
49.0	**Environmental Emergencies:** Demonstrate a fundamental depth, foundational breadth of knowledge of pathophysiology, assessment and management of environmental emergencies, patients of all ages. The student will be able to:
	49.01 Define drowning and discuss its incidence, rick factors and prevention.
	49.02 Discuss the pathophysiology, signs and symptoms, and MOI of the following: • Drowning and water related incidents • Temperature-related illness • Bites and envenomation • Dysbarism such as high-altitude injuries • Diving injuries

	• Lightning (electrical) injury • High altitude illness • Radiation exposure • Other environmental emergencies
49.03	Describes and demonstrate the assessment and management for a patient with the following: • drowning and water related incidents • Temperature-related illness • Bites and envenomation • Dysbarism such as high-altitude injuries • Diving injuries • Lightning (electrical) injury • High altitude illness • Radiation exposure • Other environmental emergencies
49.04	Discuss the fundamental principles of the gas laws including Boyle's, Dalton, Henry and Charles.
49.05	Discuss scene management and provider safety considerations for a variety of environmental emergencies.
49.06	Explain the five ways a body can lose heat.
49.07	Discuss potentially life-threatening venomous species of insects, spiders and snakes in the U.S.
50.0	**Multi-Systems Trauma:** Demonstrate a fundamental depth, foundational breadth of knowledge of pathophysiology, assessment, and management of multi-system trauma and blast injuries, patients of all ages. The student will be able to:
50.01	Discuss the pathophysiology, signs and symptoms, and MOI of multi-system trauma and blast injuries.
50.02	Describe and demonstrate assessment and management considerations for a patient of multi system trauma and blast injuries.
51.0	**Obstetrics:** Demonstrate a fundamental depth, foundational breadth of knowledge of management of the obstetric patient within the scope of practice of the EMT. The student will be able to:
51.01	Identify and describe the anatomical and the physiological changes during pregnancy.
51.02	Define the stages of labor and discuss how to assess them.
51.03	Differentiate between cephalic and abnormal delivery.
51.04	Describe the management of a patient with pre-delivery emergencies.
51.05	Discuss and demonstrate the patient care measures for all stages of labor in a cephalic delivery for the mother and the newborn.
51.06	Describe the management of the mother post-delivery.
51.07	Discuss and demonstrate the patient care measures for all stages of labor in abnormal deliveries for the mother and the newborn.
51.08	Describe the procedures for handling complications of delivery.

	51.09 Describe special considerations when meconium is present in amniotic fluid or during delivery.
	51.10 Identify the factors that lead to premature birth and low birth weight newborns.
	51.11 Demonstrate the procedures for handling complications of pregnancy including pre-eclampsia, eclampsia, and high risk.
52.0	**Neonatal Care:** Demonstrate a fundamental depth, foundational breadth of knowledge of management of the newborn and neonatal patient within the scope of practice of the EMT. The student will be able to:
	52.01 Discuss and demonstrate assessment and management considerations of a neonate.
	52.02 Define the term neonate.
	52.03 Describe special patient care considerations of a premature baby.
	52.04 Calculate the Apgar score given various newborn situations.
	52.05 Discuss the common signs when ventilator assistance is appropriate for a neonate.
	52.06 Discuss and demonstrate the steps in resuscitation of a neonate.
	52.07 Review the signs of hypovolemia in a newborn.
	52.08 Discuss the effects maternal narcotic usage has on the newborn.
	52.09 Discuss the management/treatment plan for vomiting in the neonate.
	52.10 Discuss the assessment findings associated with common birth injuries in the neonate.
53.0	**Pediatrics:** Demonstrate a fundamental depth, fundamental breath of knowledge of management of the pediatric patient within the scope of practice of the EMT. The student will be able to:
	53.01 Review the anatomy, physiology and pathophysiology differences of patients.
	53.02 Discuss the differences in approaching and assessing patients.
	53.03 Discuss and demonstrate assessment and management considerations for Sudden Unexplained Infant Death Syndrome (SUIDS).
	53.04 Describe the selection of appropriate airway adjuncts and ventilation devices.
	53.05 Discuss complications of improper utilization of airway adjuncts and ventilation devices.
	53.06 Describe the common causes, assessment and management of respiratory distress, failure, or arrest.
	53.07 Discuss the common causes, assessment and management of hypo-perfusion.
	53.08 Discuss the common causes, assessment and management of cardiopulmonary arrest.
	53.09 Describe the common causes, assessment and management of altered level of consciousness.
	53.10 Describe the common causes, assessment and management of trauma.
	53.11 Describe the common causes, assessment and management of neurological emergencies.
	53.12 Demonstrate proper technique for administering blow-by oxygen.

	53.13 Review proper technique for suctioning.
	53.14 Review appropriate use of airway adjuncts and ventilation devices.
	53.15 Review age-appropriate basic airway clearing maneuvers for a completely obstructed airway.
54.0	**Geriatrics:** Demonstrate a fundamental depth, foundational breadth of knowledge of management of the geriatric patient within the scope of practice of the EMT. The student will be able to:
	54.01 Define and discuss the term geriatrics.
	54.02 Review the anatomy, physiology and pathophysiology of the geriatric patient.
	54.03 Discuss common emotional and psychological concerns and conditions of the geriatric patient.
	54.04 Discuss the importance of fall prevention with the geriatric patient.
	54.05 Describe principles that should be employed when assessing and communicating with the geriatric patient.
	54.06 Describe the common causes, assessment, and management of the geriatric patient with a medical, trauma, or psychosocial complaint.
55.0	**Patients with Special Challenges:** Demonstrate a simple depth, simple breadth of knowledge of the management of the patient with special challenges for patients of all ages. The student will be able to:
	55.01 Discuss the special considerations required when providing emergency care to patients with: • Abuse/neglect of vulnerable populations • Homelessness • Poverty • Bariatrics • Tech dependent • Hospice/terminally ill • Tracheostomy • Home care • Sensory deficit/loss • Developmental disability
	55.02 Discuss special considerations regarding common medical devices used in the home care of patients with special challenges including: • Respiratory devices • Cardiac devices • Gastro-urinary devices • Central & peripheral IV catheters
	55.03 Describe home care and the types of patients it serves and the services it encompasses.
	55.04 Differentiate between hospice/palliative care and curative care.
	55.05 Discuss the role of the EMT as a patient advocate for vulnerable populations.

56.0	**Principles of Safely Operating a Ground Ambulance:** Demonstrate a simple depth, foundational breadth of knowledge of risks and responsibilities of transport. The student will be able to:
	56.01 Discuss the importance of performing regular vehicle and equipment inspection.
	56.02 Demonstrate how to perform a daily inspection of an ambulance.
	56.03 Review the general provisions of Florida laws relating to the operation of the ambulance.
	56.04 Discuss the guidelines for operating an ambulance safety during emergency and non-emergency situation/incident.
	56.05 Review considerations that are required for ensuring scene safety, including personal safety, patient safety, and traffic control.
	56.06 Review how to clean and disinfect the ambulance and equipment.
57.0	**Incident Management:** Demonstrate a fundamental depth, fundamental breadth of knowledge of establishing and working within the incident management system. The student will be able to:
	57.01 Discuss the importance of NIMS (National Incidence Management System) and its functional components.
	57.02 Discuss unified command and when it is applicable.
	57.03 Describe the role of command and the procedures for transfer of command.
	57.04 List and describe the functions of the following groups and leaders in ICS as it pertains to EMS incidents: • Safety • Logistics • Rehabilitation • Staging, • Treatment • Triage • Transportation • Extrication/rescue • Morgue • Communications
	57.05 Discuss the physical and psychological signs of critical incident stress.
58.0	**Multiple Casualty Incidents:** Demonstrate a simple depth, foundational breadth of knowledge of responding to an emergency during a multiple casualty incident. The student will be able to:
	58.01 Review essential elements of scene size-up when arriving at a potential MCI.
	58.02 Describe the role of the rescuers and EMS systems in planning for MCIs and disasters.
	58.03 Describe the role of the physician at multiple casualty incidents.
	58.04 Define triage and describe the principles of triage.
	58.05 Describe the START (simple triage and rapid treatment) and JUMP START method of initial triage.

	58.06 Describe techniques used to allocate patients to hospitals and track them.
	58.07 Discuss and describe the essential equipment to provide logistical support to MCI operations.
	58.08 Describe the role of critical incident stress management during and after MCIs.
	58.09 Demonstrate the use of local/regional triage tagging system.
59.0	**Air Medical:** Demonstrate a simple depth, simple breadth of knowledge of safe air medical operations and criteria for utilizing air medical response. The student will be able to:
	59.01 Describe key scene safety considerations when preparing for a helicopter medivac, including establishing a landing zone and approaching the aircraft.
	59.02 Describe the capabilities, protocols, and methods for accessing air medical transport.
	59.03 Review the advantages and disadvantages of air medical transport.
	59.04 Review the conditions/situations in which air medical transport should be considered.
60.0	**Vehicle Extrication:** Demonstrate a simple depth, simple breadth of knowledge for safe vehicle extrication and use of simple hand tools. The student will be able to:
	60.01 Describe the role of the EMT in patient rescue and vehicle extrication
	60.02 Describe personal and patient safety during vehicle extrication.
	60.03 Explain the difference between simple access and complex access in vehicle extrication.
	60.04 Discuss patient care consideration related to assisting with rapid extrication, providing emergency care to the trapped patient and removing and transferring a patient.
	60.05 Discuss the use of simple hand tools used for vehicle extrication.
	60.06 Discuss and describe the hazards and safe practices associated with the following vehicle components: • Energy absorbing bumpers • Air bag/supplemental restraint systems • Catalytic converters and conventional fuel systems • Stored energy • Hybrid-electric vehicles
	60.07 Describe methods for emergency stabilization using rope, cribbing, jacks, spare tire, and come-a-longs for vehicles.
	60.08 Describe the electrical hazards commonly found at highway incidents (above and below ground).
	60.09 Explain the difference between tempered and safety glass, identify its locations on a vehicle and how to break it safely.
	60.10 Explain typical door anatomy and methods to gain access to the patient.
61.0	**Hazardous Materials Awareness:** Demonstrate a simple depth, simple breadth of knowledge of risks and responsibilities of operating in a cold zone at a hazardous material or other special incident. The student will be able to:
	61.01 Identify and describe resources for substance identification, decontamination, and treatment information, including but not limited to the following:

	• Poison control center • Medical control • Material safety data sheets (MSDS), • Reference textbooks • Computer databases • Computer-Aided Management of Emergency Operations (CAMEO) • CHEMTREC • Technical specialists • Agency for toxic substances and disease registry
61.02	Explain primary and secondary contamination risk.
61.03	Review routes of exposure.
61.04	Discuss how the substance and route of contamination alters triage and decontamination methods.
61.05	Explain the common signs, symptoms, and treatment for the following substances: • Corrosives • Pesticides • Chemical asphyxiants • Hydrocarbon solvents
61.06	Identify local facilities and resources capable of treating patients exposed to hazardous materials.
61.07	Determine the appropriate level of PPE by considering the following: • Types Application • Use and limitations • Use of chemical compatibility chart
61.08	Explain specific decontamination procedures.
61.09	Discuss the designated HAZMAT control zones (HOT, WARM, and COLD).
61.10	Discuss an emergency two-step decontamination process.
61.11	Identify DOT Labels, placards and markings that are used to designate HAZMAT materials.
61.12	Demonstrate the ability to use a variety of reference materials to identify a HAZMAT material.
62.0	**Mass Casualty Incidents Due to Terrorism and Disaster:** Demonstrate a simple depth, simple breadth of knowledge of risks and responsibilities of operating on the scene of a natural or man-made disaster. The student will be able to:
62.01	Describe the role of the EMT on the scene of a natural or man-made disaster.
62.02	Define the different types of terrorism and provide examples of incidents of each.
62.03	Describe the factors related to ensuring situational safety at the site of a disaster and the procedures required.
62.04	Discuss the National Terrorism Advisory System.

62.05	Discuss factors to consider when responding to a terrorist situation.
62.06	Review important actions to take at the scene of a terrorist event such as: • Scene safety • Personal protection • Notification procedures • Available resources • Working with in the command system
62.07	List and describe the main categories of weapons of mass destruction.
62.08	Discuss the different types of chemical agents and their signs and symptoms.
62.09	Review the treatment and management of patients exposed to various types of chemical agents and radiation.
62.10	Review the different types of radiations and their effect on the human body.
62.11	Discuss the use of a nerve agent antidote kit.

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as, experimental, quality, and safety procedures are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate and troubleshoot equipment/tools used to make observations. Students understand measurement error; and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

Special Notes

The Bureau of Fire Standards and Training (BFST) is responsible for establishing uniform minimum standards for the employment and training of firefighters and volunteer firefighters and for establishing and maintaining firefighting training programs, curricula requirements, and certification of training schools and training school instructors.

The Curriculum Development staff is responsible for the design, implementation, maintenance, evaluation, and revision of job-related curricula for the Bureau of Fire Standards and Training (BFST) approved firefighters and volunteer firefighters, advanced, specialized, and specialized instructor training programs for firefighters. See the following website for additional information:
http://www.myfloridacfo.com/Division/SFM/BFST/Standards/default.htm

Career and Technical Student Organization (CTSO)

CTSOs are co-curricular career and technical student organizations providing leadership training and reinforcing specific career and technical skills. Career and Technical Student Organizations provide activities for students as an integral part of the instruction offered. Other CTSOs not listed in this curriculum framework or recognized by the Florida Department of Education are permissible provided they support student mastery over the standards and benchmarks of this curriculum framework.

Cooperative Training – OJT

On-the-job training is appropriate but not required for this program. Whenever offered, the rules, guidelines, and requirements specified in the OJT framework apply.

Basic Skills

In Career Certificate programs offered for 450 hours or more, in accordance with Rule 6A-10.040, F.A.C., the minimum basic skills grade levels required for postsecondary adult career and technical students to complete this program are: Computation (Mathematics) and Communications (Reading and Language Arts). These grade level numbers correspond to a grade equivalent score obtained on a state designated basic skills examination.

Adult students with disabilities, as defined in Section 1004.02, Florida Statutes, may be exempted from meeting the Basic Skills requirements (Rule 6A-10.040, F.A.C.). Students served in exceptional student education (except gifted) as defined in s. 1003.01, F.S., may also be exempted from meeting the Basic Skills requirement. Each school district and Florida College System Institution must adopt a policy addressing procedures for exempting eligible students with disabilities from the Basic Skills requirement as permitted in Section 1004.91, F.S.

Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

Note: postsecondary curriculum and regulated secondary programs cannot be modified.

Florida Department of Education
Curriculum Framework

Program Title: Radiologic Technology
Program Type: Career Preparatory
Career Cluster: Health Science

This program is only authorized to be offered by Marion Technical College in accordance with a multi-decade grandfathering agreement with the Florida Department of Health. In the mid-2000s the license to practice as a radiologic technologist was leveled at the associate degree level or higher. Marion Technical College was permitted to continue to offer training at the career certificate level. This training is limited to students who have already been awarded an associate degree or higher from an accredited institution of higher education.

Career Certificate Program		
Program Number	W170210	
CIP Number	0351091100	
Grade Level	30, 31	
Program Length	2700 clock hours	
Teacher Certification	Refer to the **Program Structure** section.	
CTSO	HOSA	
SOC Codes (all applicable)	For program SOC codes, please see the Program and Course Tables section of the CTE Program Resources page linked below.	
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml	
Basic Skills Level	Computation (Mathematics): 11	Communications (Reading and Language Arts): 11

Purpose

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Health Science career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of the Health Science career cluster.

The purpose of this program is to prepare students for employment as Radiographers, Radiologic Technologists/Technicians or to provide supplemental training for persons previously or presently employed in these occupations.

The content includes but is not limited to introduction to radiography, medical ethics and law, medical terminology, methods of patient care, human structure and function, radiographic procedures, principles of radiographic exposure, imaging equipment, image processing, radiation physics, principles of radiation protection, principles of radiation biology, radiographic pathology, introduction to quality assurance, introduction to computer literacy, and clinical education. The curriculum includes a plan for well-structured competency based clinical education.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Program Structure

This program is a planned sequence of instruction consisting of 3 occupational completion points.

This program is comprised of courses which have been assigned course numbers in the SCNS (Statewide Course Numbering System) in accordance with Section 1007.24 (1), F.S. Career and Technical credit shall be awarded to the student on a transcript in accordance with Section 1001.44(3) (b), F.S.

To teach the courses listed below, instructors must hold at least one of the teacher certifications indicated for that course.

The following table illustrates the postsecondary program structure:

OCP	Course Number	Course Title	Teacher Certification	Length
A	RTE0004	Fundamentals of Radiologic Technology	TEC X Ray @7 7G	96 hours
	RTE0410	Radiographic Imaging & Exposure I		96 hours
	RTE0505	Radiographic Procedures I		96 hours
	RTE0809	Clinical Education I		312 hours
B	RTE0450	Radiographic Imaging & Exposure II		90 hours
	RTE0506	Radiographic Procedures II		90 hours
	RTE0507	Radiographic Procedures III		66 hours
	RTE0819	Clinical Education II		504 hours
C	RTE0015	Advanced Modality Imaging		54 hours
	RTE0780	Radiographic Pathology & Directed Research		86 hours
	RTE0610	Radiation Physics		86 hours
	RTE0829	Clinical Education III		220 hours
	RTE0839	Advanced Clinical Education IV		340 hours
	RTE0380	Radiation Biology & Radiation Protection		51 hours
	RTE0849	Advanced Clinical Education V		360 hours
	RTE0939	Radiography Seminar		153 hours

Regulated Programs

The program must be approved by the Department of Health, Bureau of Radiation Control so that the graduate is eligible for licensure in Florida as a Certified Radiologic Technologist. As specified in Chapter 468 Part IV, F.S. and Chapter 64E-3, F.A.C.

The program must be accredited by the Joint Review Committee on Education in Radiologic Technology (JRCERT), 20 North Wacker Drive, Suite 900, Chicago, Illinois 60606-2901, (312) 704-5300, or any other appropriate accrediting agency acceptable to the American Registry of Radiologic Technologists (ARRT).

National Standards (NS)

Programs identified as having Industry or National Standards have been cross walked with the corresponding standards and/or benchmarks. Industry or National Standards for the Radiologic Technology program can be found at American Society of Radiologic Technologists using the following link: www.ASRT.org

Florida's Career Readiness Skills for CTE Programs

Employability Skills	
01.0	Apply academic skills to workplace scenarios.
01.01	Use reading skills.
01.02	Use writing skills.
01.03	Use mathematical strategies and procedures.
01.04	Use scientific principles and procedures.
02.0	Design a solution to an industry problem.
02.01	Use critical thinking.
02.02	Use creativity.
02.03	Make sound decisions.
02.04	Solve problems.
02.05	Reason.
02.06	Plan and organize.
03.0	Manage resources within an industry project
03.01	Manage time.
03.02	Manage money or resources.
03.03	Manage materials.
03.04	Manage personnel.
04.0	Oversee the subcomponents, operations and output of a technical or organizational system.
04.01	Manage systems.
04.02	Monitor systems.
04.03	Improve systems.
05.0	Use information for decision making.
05.01	Locate information.
05.02	Organize information.
05.03	Use information.
05.04	Analyze information.

	05.05 Communicate information.
06.0	Apply relevant technology to workplace scenarios to aid productivity.
	06.01 Use technology.
07.0	Interpret and express interpersonal communication.
	07.01 Communicate verbally.
	07.02 Listen actively.
	07.03 Comprehend written material.
	07.04 Convey information in writing.
	07.05 Communicate nonverbally.
	07.06 Interpret nonverbal communication.
08.0	Interact with others to accomplish workplace goals.
	08.01 Collaborate with others in a team.
	08.02 Respond to customer needs.
	08.03 Exercise leadership.
	08.04 Negotiate to resolve conflict.
	08.05 Respect others.
09.0	Manage personal behavior to maximize productivity and professional growth.
	09.01 Demonstrate responsibility and self-discipline.
	09.02 Adapt and show flexibility.
	09.03 Work independently.
	09.04 Demonstrate a willingness to learn.
	09.05 Demonstrate integrity.
	09.06 Demonstrate professionalism.
	09.07 Take initiative.
	09.08 Display positive attitude.
	09.09 Take responsibility for professional growth.
Job Attainment	
10.0	Find, assess and apply to job opportunities.

	10.01 Identify online job posts relevant to his or her career aspirations.
	10.02 Compare and contrast the job posts' required qualifications, job duties, compensation, benefits and employers.
	10.03 Define what information, documentation and writing prompts are required for the positions.
11.0	Communicate personal competence, character and fit for a job opportunity.
	11.01 Develop a resume.
	11.02 Write a cover letter.
	11.03 Curate a professional portfolio that includes work products.
	11.04 Prepare for and experience a mock job interview.
12.0	Cultivate and leverage relationships to professionally advance.
	12.01 Request a signed reference letter, letter of recommendation and/or an online skill/professionalism endorsement.
	12.02 Develop a plan to cultivate a professional digital footprint.
	12.03 Develop a networking plan for a specific industry of interest.

Standards

After successfully completing this program, the student will be able to perform the following:

01.0 Demonstrate a functional knowledge of medical terminology required in radiologic science.
02.0 Convey an understanding of the ethics and laws that impact radiologic sciences at both the state and federal levels.
03.0 Demonstrate introductory knowledge of radiologic science and the health care system.
04.0 Demonstrate knowledge of and perform patient care procedures required in radiologic sciences.
05.0 Demonstrate an understanding of pharmacology and venipuncture procedures as it relates to radiologic science.
06.0 Demonstrate proficiency in the skills, techniques and knowledge required for image analysis.
07.0 Demonstrate proficiency in the skills, techniques and knowledge required to operate imaging equipment.
08.0 Convey an understanding of the principles of imaging and the various factors that contribute to accuracy including x-ray production, image formation, and factors related to radiographic quality.
09.0 Demonstrate an understanding of the structure and function of the human body with a focus on the muscular, endocrine, respiratory, urinary and appendicular skeletal systems.
10.0 Demonstrate proficiency in the skills, techniques and knowledge required to perform accurate radiographic procedures.
11.0 Demonstrate the proficiency in the skills and knowledge required of clinical practice.
12.0 Convey an understanding of the principles of imaging and the various factors that contribute to accuracy including image acquisition and processing, scatter radiation control, and image evaluation.
13.0 Demonstrate an understanding of the concepts and equipment required of digital image acquisition and display.
14.0 Demonstrate an understanding of the structure and function of the human body with a focus on the axial skeletal system.
15.0 Demonstrate an understanding of the structure and function of the human body with a focus on the circulatory/cardiovascular, digestive and reproductive systems.
16.0 Demonstrate proficiency in the skills, techniques and knowledge required to perform accurate fluoroscopic procedures.
17.0 Demonstrate an understanding of the structure and function of the human body with a focus on the nervous system.
18.0 Demonstrate introductory knowledge of computed tomography.
19.0 Demonstrate appropriate venipuncture technique.
20.0 Demonstrate an understanding of radiographic pathology.
21.0 Demonstrate an understanding of how radiation is produced and the characteristics of different classifications of radiation.
22.0 Demonstrate an understanding of the structure and function of the human body including the immune system and chemical composition of the body.
23.0 Demonstrate an understanding of the integral aspects of radiation biology required of a radiographer.
24.0 Convey the importance for proper radiation protection and the precautions radiographers should take to prevent unnecessary exposure to themselves and patients.
25.0 Demonstrate proficiency in knowledge and skills required of a licensed radiologic technologist.

Florida Department of Education
Student Performance Standards

Program Title: Radiologic Technology
Career Certificate Program Number: W170210

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Course Number: RTE0004 **Occupational Completion Point: A** **Fundamentals of Radiologic Technology – 96 Hours**	
01.0	Demonstrate a functional knowledge of medical terminology required in radiologic science. The student will be able to:
01.01	Apply the word-building process for medical terminology.
01.02	Interpret medical abbreviations and symbols.
01.03	Critique orders and requests.
01.04	Define medical imaging and radiation.
01.05	Translate medical terms, abbreviations and symbols into layman's terms.
02.0	Convey an understanding of the ethics and laws that impact radiologic sciences at both the state and federal levels. The student will be able to:
02.01	Discuss the origins of medical ethics.
02.02	Apply medical/professional ethics in the context of a broader societal ethic.
02.03	Explain the role of ethical behavior in health care delivery.
02.04	Explain concepts of personal honesty, integrity, accountability, competence and compassion as ethical imperatives in health care.
02.05	Identify legal and professional standards and relate each to practice in health professions.
02.06	Identify specific situations and conditions that give rise to ethical dilemmas in health care.
02.07	Explain select concepts embodied in the principles of patients' rights, the doctrine of informed (patient) consent and other issues related to patients' rights.
02.08	Explain the legal implications of professional liability, malpractice, professional negligence and other legal doctrines applicable to professional practice.
02.09	Describe the importance of timely, accurate, and comprehensive methods of documentation as a legal and ethical imperative.
02.10	Explore theoretical situations and questions relating to the ethics of health care delivery.

	02.11 Explain legal terms, principles, doctrines and laws specific to the radiologic sciences.
	02.12 Outline the conditions necessary for a valid malpractice claim in medical imaging.
	02.13 Describe institutional and professional liability protection typically available to the radiographer.
	02.14 Describe the components and implications of informed consent.
	02.15 Identify standards for informed consent and disclosure of protected health information (PHI).
	02.16 Describe how consent forms are used relative to specific radiographic procedures.
	02.17 Differentiate between civil and criminal liability.
	02.18 Define tort and explain the differences between intentional and unintentional torts.
03.0	Demonstrate introductory knowledge of radiologic science and the health care system. The student will be able to:
	03.01 Identify health science professions that participate in the total health care of the patient.
	03.02 Identify various settings involved in the delivery of health care.
	03.03 Discuss the reimbursement/payment options for health care services.
	03.04 Discuss the role and value of a mission statement to the operation of a healthcare institution.
	03.05 Describe relationships and interdependencies of departments within a health care institution.
	03.06 Discuss the responsibilities and relationships of all personnel in the radiology department.
	03.07 Differentiate between quality assurance (QA) and continuous quality improvement (CQI).
	03.08 Differentiate between accreditation types.
	03.09 Define credentialing, national certification, registration, and state licensure.
	03.10 Discuss career opportunities and advancement for the radiographer.
	03.11 Identify the benefits of continuing education as related to improved patient care and professional development.
	03.12 Describe the types, purpose, and functions of professional organizations (ASRT).
	03.13 Identify educational and certifications requirements.
	03.14 Identify state and federal regulatory agencies.

04.0	Demonstrate knowledge of and perform patient care procedures required in radiologic sciences. The student will be able to:
04.01	Identify the responsibilities of the health care facility and members of the health care team.
04.02	List the general responsibilities of the radiographer.
04.03	Describe the practice standards for the radiographer as defined by the ASRT and state licensure.
04.04	Differentiate between culture and ethnicity.
04.05	Explain perceptions of dying and death from the viewpoint of both patient and radiographer.
04.06	Identify methods for determining the correct patient for a given procedure.
04.07	Explain the use of various communication models.
04.08	Explain specific aspects of a radiographic procedure to the patient.
04.09	Demonstrate correct principles of body mechanics applicable to patient care.
04.10	Demonstrate techniques for specific types of patient transfer.
04.11	Demonstrate select procedures to turn patients who have various health conditions.
04.12	Describe immobilization techniques for various types of procedures and patient conditions.
04.13	Describe specific patient safety measures and concerns.
04.14	Explain the purpose, legal considerations and procedures for incident reporting.
04.15	Describe methods to evaluate patient physical status.
04.16	List the information to be collected prior to a patient examination.
04.17	Describe vital signs and lab values used to assess the condition of the patient, including sites for assessment and normal values.
04.18	Define terms related to infection control.
04.19	Describe the importance of standard precautions and isolation procedures, including sources and modes of transmission of infection and disease and institutional control procedures.
04.20	Identify symptoms related to specific emergency situations.
04.21	Describe the institution’s emergency medical code system and the role of the student during a medical emergency.
04.22	Explain the age-specific considerations necessary when performing radiographic procedures.

04.23	Describe appropriate procedures for management of various types of trauma situations.
04.24	Describe the symptoms and medical interventions for a patient with a contrast agent reaction.
04.25	Explain the role of the radiographer in patient education.
04.26	Describe the patient preparation for contrast studies.
04.27	Identify specific types of tubes, lines, catheters and collection devices.
04.28	Outline the steps in the operation and maintenance of suction equipment.
04.29	Outline the steps in the operation and maintenance of oxygen equipment and demonstrate proper use.
04.30	Demonstrate competency in basic life support (BLS).
04.31	Describe the steps in performing various mobile procedures.
04.32	Describe the special problems faced in performing procedures on a patient with a tracheotomy and specific tubes, drains and catheters.
04.33	Describe the procedure for producing diagnostic images in the surgical suite.
04.34	Explain the appropriate radiation protection required when performing mobile/surgical radiography.
05.0	Demonstrate an understanding of pharmacology and venipuncture procedures as it relates to radiologic science. The student will be able to:
05.01	Distinguish between the chemical, generic and trade names of various drugs.
05.02	Describe the pharmacokinetic, pharmacodynamics and pharmacogenetic principles of drugs.
05.03	Explain the uses and impact on the patient of different categories of drugs.
05.04	Define the categories of contrast agents and give specific examples for each category.
05.05	Explain the pharmacology of contrast agents.
05.06	Describe methods and techniques for administering various types of contrast agents.
05.07	Identify and describe the routes of drug administration.

Course Number: RTE0410 Occupational Completion Point: A Radiographic Imaging & Exposure I – 96 Hours	
06.0	Demonstrate proficiency in the skills, techniques and knowledge required for image analysis. The student will be able to:
06.01	Discuss the elements of a radiographic image.
06.02	Identify anatomy on radiographic images.
06.03	Apply a problem-solving process used for image analysis.
06.04	Describe an effective image analysis method.
06.05	Describe the role of the radiographer in image analysis.
06.06	Apply the process for evaluating images for adequate image receptor exposure, exposure indicator, contrast/greyscale/spatial resolution, identification markers, and appropriate use of beam restriction.
06.07	Summarize the importance of proper positioning.
06.08	Discuss the impact of patient preparation on the resulting radiographic image.
06.09	Identify common equipment malfunctions that affect image quality, and corrective action.
06.10	Differentiate between technical factor problems, procedural factor problems and equipment malfunctions.
06.11	Critique images for appropriate technical, procedural and pathologic factors, and employ corrective actions if necessary.
06.12	Differentiate images produced by various modalities.
06.13	Apply a process for evaluating images for acceptable limits of distortion, image artifacts, radiation fog, noise, and gross exposure.
07.0	Demonstrate proficiency in the skills, techniques and knowledge required to operate imaging equipment. The student will be able to:
07.01	Describe potential difference, current and resistance.
07.02	Describe the general components and functions of the tube and filament circuits.
07.03	Compare generators in terms of radiation produced and efficiency.
07.04	Discuss mobile and fixed radiographic equipment in terms of purpose, components, types and applications.
07.05	Demonstrate operation of various types of fixed and mobile radiographic equipment.
07.06	Discuss fixed, fluoroscopy and mobile equipment in terms of purpose, components, types and applications.

07.07	Describe the components and function of automatic exposure control (AEC) devices.
07.08	Demonstrate proper use of AEC devices.
07.09	Describe the components of diagnostic x-ray tubes.
07.10	Explain methods used to extend x-ray tube life.
07.11	Explain image-intensified, flat panel, and pulsed fluoroscopy.
07.12	Indicate the purpose, construction and application of fluoroscopic monitor.
07.13	Differentiate between quality assurance (QA) and quality control (QC).
07.14	List the benefits of a quality control management to the patient and to the department.
07.15	Evaluate the results of standard QC tests.
07.16	Discuss the image appearance and basic principles of operation for equipment used in various imaging modalities.
07.17	Describe continuous quality improvement (CQI).
07.18	Describe the components of the various types of display monitors.
07.19	Compare monitor types (e.g., acquisition, display).
07.20	Discuss quality control (QC) for imaging equipment and accessories.
07.21	Discuss the appropriate use of electronic masking.
07.22	Recognize and compare basic equipment used in various imaging modalities.
08.0	Convey an understanding of the principles of imaging and the various factors that contribute to accuracy including x-ray production, image formation and factors related to radiographic quality. The student will be able to:
08.01	Discuss practical considerations in setting standards for acceptable image quality.
08.02	Assess radiographic exposure on radiographic images.
08.03	Analyze the relationships of factors that control and affect image exposure.
08.04	Critique the radiographic contrast within various radiographic images.
08.05	Analyze the relationship of factors that control and affect radiographic contrast.
08.06	Critique spatial resolution on various radiographic images.

08.07	Analyze the relationships of factors that control and affect spatial resolution.
08.08	Differentiate between size and shape distortion.
08.09	Perform calculations to determine image magnification and percent magnification.
08.10	Summarize the relationship of factors that control and affect distortion.
08.11	Explain the rationale for using beam restriction devices.
08.12	Describe the operation and applications for different types of beam restriction.
08.13	Explain how beam filtration affects x-ray beam intensity, beam quality and patient exposure.
08.14	Describe the change in the half-value layer (HVL) when filtration is added or removed.
08.15	Describe the impact of sampling frequency on spatial resolution.
08.16	Define sampling frequency.
08.17	Describe the impact of detector element size on spatial resolution.
08.18	Describe the Nyquist-Shannon theorem as it relates to sampling frequency.
08.19	Describe the process of image stitching.

Course Number: RTE0505 **Occupational Completion Point: A** **Radiographic Procedures I – 96 Hours**	
09.0	Demonstrate an understanding of the structure and function of the human body with a focus on the muscular, endocrine, respiratory, urinary and appendicular skeletal systems. The student will be able to:
09.01	Discuss the basics of anatomical nomenclature.
09.02	Classify tissue types, describe the functional characteristics of each and give examples of their location within the human body.
09.03	Describe the composition and characteristics of bone.
09.04	Identify and locate the bones of the human skeleton.
09.05	Identify bony processes and depressions found on the human skeleton.
09.06	Summarize the functions of the skeletal system.
09.07	Label different types of articulations.

09.08	Compare the types, locations and movements permitted by the different types of articulations.
09.09	Examine how muscle is organized at the gross and microscopic levels.
09.10	Differentiate between the structures of each type of muscle tissue.
09.11	State the function of each type of muscle tissue.
09.12	Name and locate the major muscles of the skeleton.
09.13	Define endocrine.
09.14	Describe the characteristics and functions of the components that comprise the endocrine system.
09.15	Differentiate between peritoneum, omentum and mesentery.
09.16	Label the components of the respiratory system.
09.17	Describe the physiology and regulation of respiration.
09.18	Label the parts of the kidneys, ureters, bladder and urethra.
09.19	Describe the function of each organ of the urinary system.
09.20	Describe the composition and formation of urine.
09.21	Explain micturition.
09.22	Identify major sectional anatomical structures found within the head and neck, thorax and abdomen.
10.0	Demonstrate proficiency in the skills, techniques and knowledge required to perform accurate radiographic procedures. The student will be able to:
10.01	Describe standard positioning terms.
10.02	Demonstrate proper use of positioning aids.
10.03	Discuss general procedural considerations for radiographic exams.
10.04	Identify methods and barriers of communication and describe how each may be used or overcome effectively during patient education.
10.05	Explain radiographic procedures to patients/family members.
10.06	Modify directions to patients with various communication problems.
10.07	Develop an awareness of cultural factors that necessitate adapting standard exam protocols.

10.08 Adapt general procedural considerations to specific clinical settings.
10.09 Identify the structures demonstrated on routine radiographic images.
10.10 Adapt radiographic procedures for special considerations.
10.11 Simulate radiographic procedures on a person or phantom in a laboratory or clinical setting.
10.12 Evaluate images for positioning, centering, appropriate anatomy and overall image quality.
10.13 Discuss equipment and supplies necessary to complete basic radiographic procedures.
10.14 Explain the routine and special positions and projections for all radiographic procedures.
10.15 Describe the general purpose of radiographic studies.
10.16 Apply general radiation safety and protection practices associated with radiographic examinations.
10.17 Define region of interest (ROI).
10.18 Define basic terms related to indications and contraindications related to imaging studies.

Course Number: RTE0809
Occupational Completion Point: A
Clinical Education I – 312 Hours

Clinical Education I provides a foundational practicum in which students are expected to apply skills learned in *Fundamentals of Radiologic Technology* and *Radiographic Procedures I.* The course objectives in *Clinical Education I* repeat in subsequent practicums of clinical education due to the progressive approach to student competency and proficiency. This course is a necessary prerequisite for advancing to *Clinical Education II.*

The content and clinical practice experiences within the course of *Clinical Education I* are designed to sequentially develop, apply, critically analyze, integrate, synthesize and evaluate concepts and theories in the performance of radiologic procedures. Through structured, sequential and competency-based clinical assignments, students will adopt and apply concepts of team practice, radiation protection, and become skillful in patient-centered clinical practice while developing professional expertise and conduct that are discussed, examined and evaluated.

Clinical Education I provides students with practical experiences in patient care and assessment, fosters competent performance of radiologic imaging and impacts total quality management standards. Levels of competency and performance outcomes are measured at six-week intervals. This is designed to ensure the well-being of patients before, during and after performance of radiologic procedures. The evaluative measurement tools provide a mechanism that ensures progression of student competency and proficiency.

11.0 Demonstrate the proficiency in the skills and knowledge required of clinical practice. The student will be able to:
11.01 Exercise the priorities required in daily clinical practice.

11.02	Execute medical imaging procedures under the appropriate level of supervision.
11.03	Adhere to team practice concepts that focus on organizational theories, roles of team members and conflict resolution.
11.04	Adapt to changes and varying clinical situations.
11.05	Describe the role of health care team members in responding/reacting to a local or national emergency.
11.06	Provide patient-centered, clinically effective care for all patients regardless of age, gender, disability, special needs, ethnicity or culture.
11.07	Integrate the use of appropriate and effective written, oral and nonverbal communication with patients, the public and members of the health care team in the clinical setting.
11.08	Integrate appropriate personal and professional values into clinical practice.
11.09	Recognize the influence of professional values on patient care.
11.10	Explain how a person's cultural beliefs toward illness and health affect his or her health status.
11.11	Use patient and family education strategies appropriate to the comprehension level of the patient/family.
11.12	Provide desired psychosocial support to the patient and family.
11.13	Demonstrate competent assessment skills through effective management of the patient's physical and mental status.
11.14	Respond appropriately to medical emergencies.
11.15	Examine demographic factors that influence patient compliance with medical care.
11.16	Adapt procedures to meet age-specific, disease-specific and cultural needs of patients.
11.17	Assess the patient and record clinical history.
11.18	Demonstrate basic life support procedures.
11.19	Use appropriate charting/electronic documentation methods.
11.20	Recognize life-threatening electrocardiogram (ECG) tracing.
11.21	Apply standard and transmission-based precautions.
11.22	Apply the appropriate medical asepsis and sterile technique.
11.23	Demonstrate competency in the principles of radiation protection standards.
11.24	Apply the principles of total quality management.

11.25	Report equipment malfunctions.
11.26	Examine procedure orders for accuracy and make corrective actions when applicable.
11.27	Demonstrate safe, ethical and legal practices.
11.28	Integrate the radiographer's practice standards into clinical practice setting.
11.29	Maintain patient confidentiality standards and meet HIPAA requirements.
11.30	Demonstrate the principles of transferring, positioning and immobilizing patients.
11.31	Comply with departmental and institutional response to emergencies, disasters and accidents.
11.32	Differentiate between emergency and non-emergency procedures.
11.33	Adhere to national, institutional and departmental standards, policies and procedures regarding care of patients, providing radiologic procedures and reducing medical errors.
11.34	Select technical factors to produce quality diagnostic images with the lowest radiation exposure possible.
11.35	Critique images for appropriate anatomy, image quality and patient identification.
11.36	Determine corrective measures to improve inadequate images.

Course Number: RTE0450 **Occupational Completion Point: B** **Radiographic Imaging & Exposure II – 90 Hours**	
12.0	Convey an understanding of the principles of imaging and the various factors that contribute to accuracy including image acquisition and processing, scatter radiation control, and image evaluation. The student will be able to:
12.01	Summarize the relationship of factors affecting scattered radiation.
12.02	Evaluate the effects of scattered radiation on the image.
12.03	Compare grid types.
12.04	Select the most appropriate grid for a given clinical situation.
12.05	Interpret grid efficiency in terms of grid ratio and frequency.
12.06	Summarize the factors that influence grid cutoff.
12.07	Evaluate grid artifacts.
12.08	Explain the use of radiographic technique charts.

	12.09 Explain exposure factor considerations involved in selecting techniques.
	12.10 Compare fixed kilovoltage peak (kVp) and variable kVp systems.
	12.11 Apply the reciprocity law to clinical situations.
	12.12 Apply conversion factors for changes in the following areas: distance, grid, image receptors, reciprocity law and 15 percent rule.
13.0	Demonstrate an understanding of the concepts and equipment required of digital image acquisition and display. The student will be able to:
	13.01 Define terminology associated with digital imaging systems.
	13.02 Describe the various types of digital receptors.
	13.03 Describe the response of digital detectors to exposure variations.
	13.04 Compare the advantages and limits of each receptor type.
	13.05 Evaluate the spatial resolution of a digital imaging system.
	13.06 Describe the histogram and the process or histogram analysis as it relates to automatic rescaling and determining an exposure indicator.
	13.07 Relate the receptor exposure indicator values to technical factors, system calibration, part/beam/plate alignment and patient exposure.
	13.08 Describe the response of PSP systems to background and scatter radiation.
	13.09 Use appropriate means of scatter control.
	13.10 Avoid grid use errors associated with grid cutoff and Moiré effect.
	13.11 Identify common limitations and technical problems encountered when using PSP systems.
	13.12 Employ appropriate beam/part/receptor alignment to avoid histogram analysis errors.
	13.13 Associate impact of image processing parameters to the image appearance.
	13.14 Apply the fundamental principles of radiographic exposure to digital detectors.
	13.15 Evaluate the effect of a given exposure change on histogram shape, data width and image appearance.
	13.16 Describe the conditions that cause quantum mottle in a digital image.
	13.17 Formulate a procedure or process to minimize histogram analysis and rescaling errors.
	13.18 Examine the potential impact of digital radiographic systems on patient exposure and methods of practicing the as low as reasonably achievable (ALARA) concept with digital systems.

13.19	Describe picture archival and communications system (PACS) and its function.
13.20	Identify components of a PACS.
13.21	Define digital imaging and communications in medicine (DICOM).
13.22	Describe HIPAA concerns with electronic information.
13.23	Identify common problems associated with retrieving/viewing images within a PACS.
13.24	Describe the calculation of the exposure indicator (AAPM Task Group 116).
13.25	Relate how the values of interest (VOI) impact image appearance.
13.26	Describe signal to noise (SNR) as it relates to digital radiography detectors.
13.27	Describe modulation transfer function (MTF) as it relates to digital radiography detectors.
13.28	Describe contrast to noise (CNR) as it relates to digital radiography detectors.
13.29	Describe detective quantum efficiency (DQE) for digital radiography detectors.
13.30	Describe display monitor aspect ratio and its impact on image display
13.31	Identify critical components of the DICOM header.
13.32	Relate the location and size of the ROI to the appearance of the image and exposure indicator
13.33	Discuss the impact of viewing angle, luminance, ambient lighting and pixel size on image display.

Course Number: RTE0506
Occupational Completion Point: B
Radiographic Procedures II – 90 Hours

Radiologic Procedures II is a continuation of Radiologic Procedures I and builds on the skills and knowledge obtained in that course. In addition to the course objectives included below in Radiologic Procedures II, standards are also repeated from Radiologic Procedures I due to the progressive approach to student competency and proficiency.

14.0	Demonstrate an understanding of the structure and function of the human body with a focus on the axial skeletal system. The student will be able to:
14.01	Describe articulations of the axial skeleton.
14.02	Differentiate the primary and secondary curves of the spine.

14.03	Identify and locate the bones of the human axial skeleton.
14.04	Identify bony processes and depressions found on the human axial skeleton.
14.05	Summarize the functions of the axial skeletal system.
14.06	Label different types of articulations specific to the axial skeletal system.

Course Number: RTE0507
Occupational Completion Point: B
Radiographic Procedures III – 66 Hours

Radiologic Procedures III is a continuation of Radiologic Procedures I and Radiologic Procedures II and builds on the skills and knowledge obtained in that course. In addition to the course objectives included below in Radiologic Procedures III, standards are also repeated from Radiologic Procedures I and Radiologic Procedures II due to the progressive approach to student competency and proficiency.

15.0	Demonstrate an understanding of the structure and function of the human body with a focus on the circulatory/cardiovascular, digestive and reproductive systems. The student will be able to:
15.01	Describe the composition and characteristics of blood.
15.02	List the types of blood cells and state their functions.
15.03	Differentiate between blood plasma and serum.
15.04	Outline the clotting mechanism.
15.05	List the blood types.
15.06	Explain the term Rh factor.
15.07	Explain the antigen/antibody relationship and its use in blood typing.
15.08	Label the parts of the human heart.
15.09	Describe the flow of blood through the body and identify the main vessels.
15.10	Describe the structure and function of arteries, veins and capillaries.
15.11	Differentiate between arterial blood in systemic circulation and arterial blood in pulmonary circulation.
15.12	Outline the major pathways of lymphatic circulation.
15.13	Correlate cardiac electrophysiology to a normal ECG tracing.

15.14	Label the anatomy of the male and female reproductive organs.
15.15	Analyze the function of each of the male and female reproductive organs.
15.16	Describe the structures and functions of the components that comprise the human eye and ear.
15.17	List the component body parts involved in the senses of smell and taste.
15.18	List the somatic senses.
15.19	Describe the hard and soft palates.
15.20	Describe the structure and function of the tongue.
15.21	Identify the structure, function and locations of the salivary glands.
15.22	List and label the accessory organs of the digestive system and describe their function.
15.23	Describe the composition and characteristics of the primary organs of the digestive system.
15.24	Describe the function(s) of each primary organ of the digestive system.
15.25	Differentiate between the layers of tissue that comprise the esophagus, stomach, small intestine, large intestine and rectum.
15.26	Identify the secretions and function of each accessory organ of the digestive system.
15.27	Explain the purpose of digestion.
15.28	List the digestive processes that occur in the body.
16.0	Demonstrate proficiency in the skills, techniques and knowledge required to perform accurate fluoroscopic procedures. The student will be able to:
16.01	Identify the structures demonstrated on routine fluoroscopic images.
16.02	Adapt fluoroscopic procedures for special considerations.
16.03	Simulate fluoroscopic procedures on a person or phantom in a laboratory setting.
16.04	Evaluate images for positioning, centering, appropriate anatomy and overall image quality.
16.05	Discuss equipment and supplies necessary to complete basic fluoroscopic procedures.
16.06	Explain the patient preparation necessary for various contrast and special studies.
16.07	Explain the routine and special positions/projections for all fluoroscopic procedures.

16.08	Explain the purpose for using contrast media.
16.09	Name the type, dosage and route of administration of contrast media commonly used to perform radiographic contrast and special studies.
16.10	Describe the general purpose of fluoroscopic studies.
16.11	Apply general radiation safety and protection practices associated with fluoroscopic examinations.

Course Number: RTE0819
Occupational Completion Point: B
Clinical Education II – 504 Hours

Clinical Education II provides a foundational practicum in which students are expected to apply skills learned in *Fundamentals of Radiologic Technology and Radiographic Procedures I.* The course objectives in *Clinical Education II* repeat from *Clinical Education I* and in subsequent practicums of Clinical Education due to the progressive approach to student competency and proficiency. This course is a necessary prerequisite for advancing to *Clinical Education III.*

The content and clinical practice experiences within the course of *Clinical Education II* are designed to sequentially develop, apply, critically analyze, integrate, synthesize and evaluate concepts and theories in the performance of radiologic procedures. Through structured, sequential and competency-based clinical assignments, students will adopt and apply concepts of team practice, radiation protection, and become skillful in patient-centered clinical practice while developing professional expertise and conduct that are discussed, examined and evaluated.

Clinical Education II provides students with practical experiences in patient care and assessment, fosters competent performance of radiologic imaging and impacts total quality management standards. Levels of competency and performance outcomes are measured at six-week intervals. This is designed to ensure the well-being of patients before, during and after performance of radiologic procedures. The evaluative measurement tools provide a mechanism that ensures progression of student competency and proficiency.

11.0	Demonstrate the proficiency in the skills and knowledge required of clinical practice. The student will be able to:
11.01	Exercise the priorities required in daily clinical practice.
11.02	Execute medical imaging procedures under the appropriate level of supervision.
11.03	Adhere to team practice concepts that focus on organizational theories, roles of team members and conflict resolution.
11.04	Adapt to changes and varying clinical situations.
11.05	Describe the role of health care team members in responding/reacting to a local or national emergency.
11.06	Provide patient-centered, clinically effective care for all patients regardless of age, gender, disability, special needs, ethnicity or culture.
11.07	Integrate the use of appropriate and effective written, oral and nonverbal communication with patients, the public and members of

	the health care team in the clinical setting.
11.08	Integrate appropriate personal and professional values into clinical practice.
11.09	Recognize the influence of professional values on patient care.
11.10	Explain how a person's cultural beliefs toward illness and health affect his or her health status.
11.11	Use patient and family education strategies appropriate to the comprehension level of the patient/family.
11.12	Provide desired psychosocial support to the patient and family.
11.13	Demonstrate competent assessment skills through effective management of the patient's physical and mental status.
11.14	Respond appropriately to medical emergencies.
11.15	Examine demographic factors that influence patient compliance with medical care.
11.16	Adapt procedures to meet age-specific, disease-specific and cultural needs of patients.
11.17	Assess the patient and record clinical history.
11.18	Demonstrate basic life support procedures.
11.19	Use appropriate charting/electronic documentation methods.
11.20	Recognize life-threatening electrocardiogram (ECG) tracing.
11.21	Apply standard and transmission-based precautions.
11.22	Apply the appropriate medical asepsis and sterile technique.
11.23	Demonstrate competency in the principles of radiation protection standards.
11.24	Apply the principles of total quality management.
11.25	Report equipment malfunctions.
11.26	Examine procedure orders for accuracy and make corrective actions when applicable.
11.27	Demonstrate safe, ethical and legal practices.
11.28	Integrate the radiographer's practice standards into clinical practice setting.
11.29	Maintain patient confidentiality standards and meet HIPAA requirements.

11.30	Demonstrate the principles of transferring, positioning and immobilizing patients.
11.31	Comply with departmental and institutional response to emergencies, disasters and accidents.
11.32	Differentiate between emergency and non-emergency procedures.
11.33	Adhere to national, institutional and departmental standards, policies and procedures regarding care of patients, providing radiologic procedures and reducing medical errors.
11.34	Select technical factors to produce quality diagnostic images with the lowest radiation exposure possible.
11.35	Critique images for appropriate anatomy, image quality and patient identification.
11.36	Determine corrective measures to improve inadequate images.

Course Number: RTE0015 **Occupational Completion Point: C** **Advanced Modality Imaging – 54 Hours**	
17.0	Demonstrate an understanding of the structure and function of the human body with a focus on the nervous system. The student will be able to:
17.01	Differentiate between the structure and function of different types of nerve cells.
17.02	State the structure of the brain and the relationship of its component parts.
17.03	Describe brain functions.
17.04	List the meninges and describe the function of each.
17.05	Outline how cerebrospinal fluid forms, circulates and functions.
17.06	Describe the structure and function of the spinal cord.
17.07	Determine the distribution and function of cranial and spinal nerves.
17.08	Summarize the structure and function of components that comprise the autonomic nervous system.
18.0	Demonstrate introductory knowledge of computed tomography. The student will be able to:
18.01	Explain the difference between reconstructing and reformatting an image.
18.02	Cite the structures demonstrated on commonly performed CT images.
18.03	Describe commonly performed CT procedures.

18.04	Evaluate images for positioning, centering, appropriate anatomy and overall image quality
18.05	Discuss equipment and supplies necessary to complete commonly performed CT procedures.
18.06	Explain the CT acquisition protocol for commonly performed head/neck, thorax, and abdomen procedures.
18.07	Explain the patient preparation necessary for commonly performed CT contrast studies.
18.08	Name the type, dosage purpose, and route of contrast administration for common CT procedures.
18.09	Describe the components of the CT imaging system.
18.10	Explain the functions of collimators in CT.
18.11	List the CT computer data processing steps.
18.12	Define algorithm and explain its impact on image scan factors and reconstruction.
18.13	Define raw data and image data.
18.14	Describe the following terms in relation to the CT data acquisition process: • Pixel. • Matrix. • Voxel. • Linear attenuation coefficient. • CT/Hounsfield number. • Partial volume averaging. • Window width (ww) and window level (wl). • Spatial resolution. • Contrast resolution. • Noise. • Annotation. • Region of interest (ROI).
18.15	Name the common controls found on CT operator consoles and describe how and why each is used.
18.16	Identify the types and appearance of artifacts most commonly affecting CT images.
18.17	Name the radiation protection devices that can be used to reduce patient dose in CT and describe the correct application of each.
18.18	Describe the general purpose of commonly performed CT studies.
18.19	Discuss general radiation safety and protection practices associated with examinations in CT.

19.0	Demonstrate appropriate venipuncture technique. The student will be able to:
19.01	Differentiate between the two major sites of intravenous drug administration.
19.02	Identify, describe and document complications associated with venipuncture and appropriate actions to resolve these complications.
19.03	Discuss the various elements of initiating and discontinuing intravenous access.
19.04	Differentiate and document dose calculations for adult and pediatric patients.
19.05	Prepare for injection of contrast agents/intravenous medications using aseptic technique.
19.06	Explain the current legal status and professional liability issues of the radiographer's role in contrast and/or drug administration.
19.07	Simulate appropriate venipuncture technique.

Course Number RTE0780
Occupational Completion Point: C
Radiographic Pathology & Directed Research – 86 Hours

20.0	Demonstrate an understanding of radiographic pathology. The student will be able to:
20.01	Define basic terms related to pathology.
20.02	Describe the basic manifestations of pathological conditions and their relevance to radiologic procedures.
20.03	Discuss the classifications of trauma.
20.04	Describe imaging procedures used in diagnosing disease.
20.05	List the causes of tissue disruption.
20.06	Describe the healing process.
20.07	Identify complications connected with the repair and replacement of tissue.
20.08	Describe the various systemic classifications of disease in terms of etiology, types, common sites, complications and prognosis.
20.09	Describe the radiographic appearance of diseases.
20.10	Identify imaging procedures and interventional techniques appropriate for diseases common to each body system.
20.11	Identify diseases caused by or connected to genetic factors.

Course Number: RTE0610 **Occupational Completion Point: C** **Radiation Physics – 86 Hours**
21.0 Demonstrate an understanding of how radiation is produced and the characteristics of different classifications of radiation. The student will be able to:
21.01 Describe fundamental atomic structure.
21.02 Describe the electromagnetic spectrum.
21.03 Describe wavelength and frequency and how they are related to velocity.
21.04 Explain the relationship of energy, wavelength and frequency.
21.05 Explain the wave-particle duality phenomena.
21.06 Identify the properties of x-rays.
21.07 Describe the processes of ionization and excitation.
21.08 Describe particulate radiation.
21.09 Differentiate between ionizing and nonionizing radiation.
21.10 Describe radioactivity and radioactive decay in terms of alpha, beta and gamma emission.
21.11 Compare the production of bremsstrahlung and characteristic radiations.
21.12 Describe the conditions necessary to produce x-radiation.
21.13 Describe the x-ray emission spectrum.
21.14 Explain the factors that affect the x-ray emission spectrum.
21.15 Discuss various photon interactions with matter.
21.16 Discuss relationships of wavelength and frequency to beam characteristics.
21.17 Discuss the clinical significance of the photoelectric and modified scattering (Compton) interactions in diagnostic imaging.
21.18 Compare and contrast different types of radiation.

Course Number: RTE0829
Occupational Completion Point: C
Clinical Education III – 220 Hours

Clinical Education III provides a progressive practicum in sequence to *Clinical Education II* in which students are expected to apply skills learned in *Fundamentals of Radiologic Technology, Radiographic Procedures I, Radiographic Procedures II, Radiographic Procedures III* and all previously sequenced Clinical Education courses. The course objectives in *Clinical Education III* are repeated from *Clinical Education II* due to the progressive approach to student competency and proficiency. This course is a necessary prerequisite for advancing to *Clinical Education IV.*

The content and clinical practice experiences within the course of *Clinical Education III* are designed to sequentially develop, apply, critically analyze, integrate, synthesize and evaluate concepts and theories in the performance of radiologic procedures. Through structured, sequential and competency-based clinical assignments, students will adopt and apply concepts of team practice, radiation protection, and become skillful in patient-centered clinical practice while developing professional expertise and conduct that are discussed, examined and evaluated.

Clinical Education III provides students with practical experiences in patient care and assessment, fosters competent performance of radiologic imaging and impacts total quality management standards. Levels of competency and performance outcomes are measured at six-week intervals. This is designed to ensure the well-being of patients before, during and after performance of radiologic procedures. The evaluative measurement tools provide a mechanism that ensures progression of student competency and proficiency.

11.0	Demonstrate the proficiency in the skills and knowledge required of clinical practice. The student will be able to:
11.01	Exercise the priorities required in daily clinical practice.
11.02	Execute medical imaging procedures under the appropriate level of supervision.
11.03	Adhere to team practice concepts that focus on organizational theories, roles of team members and conflict resolution.
11.04	Adapt to changes and varying clinical situations.
11.05	Describe the role of health care team members in responding/reacting to a local or national emergency.
11.06	Provide patient-centered, clinically effective care for all patients regardless of age, gender, disability, special needs, ethnicity or culture.
11.07	Integrate the use of appropriate and effective written, oral and nonverbal communication with patients, the public and members of the health care team in the clinical setting.
11.08	Integrate appropriate personal and professional values into clinical practice.
11.09	Recognize the influence of professional values on patient care.
11.10	Explain how a person’s cultural beliefs toward illness and health affect his or her health status.
11.11	Use patient and family education strategies appropriate to the comprehension level of the patient/family.
11.12	Provide desired psychosocial support to the patient and family.

11.13	Demonstrate competent assessment skills through effective management of the patient's physical and mental status.
11.14	Respond appropriately to medical emergencies.
11.15	Examine demographic factors that influence patient compliance with medical care.
11.16	Adapt procedures to meet age-specific, disease-specific and cultural needs of patients.
11.17	Assess the patient and record clinical history.
11.18	Demonstrate basic life support procedures.
11.19	Use appropriate charting/electronic documentation methods.
11.20	Recognize life-threatening electrocardiogram (ECG) tracing.
11.21	Apply standard and transmission-based precautions.
11.22	Apply the appropriate medical asepsis and sterile technique.
11.23	Demonstrate competency in the principles of radiation protection standards.
11.24	Apply the principles of total quality management.
11.25	Report equipment malfunctions.
11.26	Examine procedure orders for accuracy and make corrective actions when applicable.
11.27	Demonstrate safe, ethical and legal practices.
11.28	Integrate the radiographer's practice standards into clinical practice setting.
11.29	Maintain patient confidentiality standards and meet HIPAA requirements.
11.30	Demonstrate the principles of transferring, positioning and immobilizing patients.
11.31	Comply with departmental and institutional response to emergencies, disasters and accidents.
11.32	Differentiate between emergency and non-emergency procedures.
11.33	Adhere to national, institutional and departmental standards, policies and procedures regarding care of patients, providing radiologic procedures and reducing medical errors.
11.34	Select technical factors to produce quality diagnostic images with the lowest radiation exposure possible.
11.35	Critique images for appropriate anatomy, image quality and patient identification.

11.36	Determine corrective measures to improve inadequate images.

Course Number RTE0839
Occupational Completion Point: C
Advanced Clinical Education IV – 340 Hours

Advanced Clinical Education IV provides an advanced progressive practicum in sequence to *Clinical Education III* in which students are expected to apply skills learned in *Fundamentals of Radiologic Technology, Radiographic Procedures I, II and III, Radiographic Imaging I and II,* and all previously sequenced Clinical Education courses. The course objectives in *Clinical Education IV* are repeated from *Clinical Education III* due to the progressive approach to student competency and proficiency. This course is a necessary prerequisite for advancing to *Clinical Education V.*

The content and clinical practice experiences within the course of *Advanced Clinical Education IV* are designed to sequentially develop, apply, critically analyze, integrate, synthesize and evaluate concepts and theories in the performance of radiologic procedures. Through structured, sequential and advanced competency-based clinical assignments, students will consistently demonstrate concepts of team practice; proficiency of skills in patient-centered clinical practice and radiation protection; and professional expertise and conduct that are discussed, examined and evaluated.

Advanced Clinical Education IV provides students with advanced practical experiences in patient care and assessment, fosters competent performance of radiologic imaging and impacts total quality management standards. *Advanced Clinical IV* includes practice in venipuncture skills and shadowing in advanced modality imaging. Levels of competency and performance outcomes are measured at six-week intervals. This is designed to ensure the well-being of patients before, during and after performance of radiologic procedures. The evaluative measurement tools provide a mechanism that ensures progression of student competency and proficiency.

11.0	Demonstrate the proficiency in the skills and knowledge required of clinical practice. The student will be able to:
11.01	Exercise the priorities required in daily clinical practice.
11.02	Execute medical imaging procedures under the appropriate level of supervision.
11.03	Adhere to team practice concepts that focus on organizational theories, roles of team members and conflict resolution.
11.04	Adapt to changes and varying clinical situations.
11.05	Describe the role of health care team members in responding/reacting to a local or national emergency.
11.06	Provide patient-centered, clinically effective care for all patients regardless of age, gender, disability, special needs, ethnicity or culture.
11.07	Integrate the use of appropriate and effective written, oral and nonverbal communication with patients, the public and members of the health care team in the clinical setting.
11.08	Integrate appropriate personal and professional values into clinical practice.

11.09	Recognize the influence of professional values on patient care.
11.10	Explain how a person's cultural beliefs toward illness and health affect his or her health status.
11.11	Use patient and family education strategies appropriate to the comprehension level of the patient/family.
11.12	Provide desired psychosocial support to the patient and family.
11.13	Demonstrate competent assessment skills through effective management of the patient's physical and mental status.
11.14	Respond appropriately to medical emergencies.
11.15	Examine demographic factors that influence patient compliance with medical care.
11.16	Adapt procedures to meet age-specific, disease-specific and cultural needs of patients.
11.17	Assess the patient and record clinical history.
11.18	Demonstrate basic life support procedures.
11.19	Use appropriate charting/electronic documentation methods.
11.20	Recognize life-threatening electrocardiogram (ECG) tracing.
11.21	Apply standard and transmission-based precautions.
11.22	Apply the appropriate medical asepsis and sterile technique.
11.23	Demonstrate competency in the principles of radiation protection standards.
11.24	Apply the principles of total quality management.
11.25	Report equipment malfunctions.
11.26	Examine procedure orders for accuracy and make corrective actions when applicable.
11.27	Demonstrate safe, ethical and legal practices.
11.28	Integrate the radiographer's practice standards into clinical practice setting.
11.29	Maintain patient confidentiality standards and meet HIPAA requirements.
11.30	Demonstrate the principles of transferring, positioning and immobilizing patients.
11.31	Comply with departmental and institutional response to emergencies, disasters and accidents.

11.32	Differentiate between emergency and non-emergency procedures.
11.33	Adhere to national, institutional and departmental standards, policies and procedures regarding care of patients, providing radiologic procedures and reducing medical errors.
11.34	Select technical factors to produce quality diagnostic images with the lowest radiation exposure possible.
11.35	Critique images for appropriate anatomy, image quality and patient identification.
11.36	Determine corrective measures to improve inadequate images.

Course Number: RTE0380 **Occupational Completion Point: C** **Radiation Biology & Radiation Protection – 51 Hours**	
22.0	Demonstrate an understanding of the structure and function of the human body including the immune system and chemical composition of the body. The student will be able to:
22.01	Describe the chemical composition of the human body.
22.02	Identify cell structure and elements of genetic control.
22.03	Explain the essentials of human metabolism.
22.04	Differentiate between nonspecific defenses and specific immunity.
22.05	Explain antibody production and function.
22.06	List the different types and functions of T- and B-cells and explain their functions.
23.0	Demonstrate an understanding of the integral aspects of radiation biology required of a radiographer. The student will be able to:
23.01	Differentiate between ionic and covalent molecular bonds.
23.02	Describe principles of cellular biology.
23.03	Identify sources of electromagnetic and particulate ionizing radiations.
23.04	Discriminate between the direct and indirect effects of radiation.
23.05	Identify sources of radiation exposure.
23.06	Describe radiation-induced chemical reactions and potential biologic damage.
23.07	Evaluate factors influencing radiobiologic/biophysical events at the cellular and subcellular level.

	23.08 Identify methods to measure radiation response.
	23.09 Describe physical, chemical and biologic factors influencing radiation response of cells and tissues.
	23.10 Explain factors influencing radiosensitivity.
	23.11 Recognize the clinical significance of lethal dose (LD).
	23.12 Identify the radiosensitivity and radioresistency of specific cells.
	23.13 Employ dose response curves to study the relationship between radiation dose levels and the degree of biologic response.
	23.14 Examine effects of limited vs. total body exposure.
	23.15 Relate short-term and long-term effects as a consequence of high and low radiation doses.
	23.16 Differentiate between somatic and genetic radiation effects and discuss specific diseases or syndromes associated with them.
	23.17 Discuss stochastic and deterministic effects.
	23.18 Discuss embryonic and fetal effects of radiation exposure.
	23.19 Discuss risk estimates for radiation-induced malignancies.
	23.20 Discuss acute radiation syndromes.
	23.21 Define basic terms related to dose differences.
24.0	Convey the importance for proper radiation protection and the precautions radiographers should take to prevent unnecessary exposure to themselves and patients. The student will be able to:
	24.01 Identify and justify the need to minimize unnecessary radiation exposure of humans.
	24.02 Explain the objectives of a radiation protection program.
	24.03 Define radiation and radioactivity units of measurement.
	24.04 Identify effective dose limits (EDL) for occupational and nonoccupational radiation exposure.
	24.05 Describe the ALARA concept.
	24.06 Identify the basis for occupational exposure limits.
	24.07 Distinguish between perceived risk and comparable risk.
	24.08 Describe the concept of the negligible individual dose (NID).

24.09	Identify ionizing radiation sources from natural and man-made sources.
24.10	Comply with legal and ethical radiation protection responsibilities of radiation workers.
24.11	Describe the relationship between irradiated area and effective dose.
24.12	Describe the theory and operation of radiation detection devices.
24.13	Identify appropriate applications and limitations for each radiation detection device.
24.14	Describe how isoexposure curves are used for radiation protection.
24.15	Identify performance standards for beam-limiting devices.
24.16	Describe procedures used to verify performance standards for equipment.
24.17	Describe the operation of various interlocking systems for equipment.
24.18	Identify conditions and locations evaluated in an area survey for radiation protection.
24.19	Distinguish between controlled and non-controlled areas and list acceptable exposure levels.
24.20	Describe “Radiation Area” signs and identify appropriate placement sites.
24.21	Describe the function of federal, state and local regulations governing radiation protection practices.
24.22	Describe the qualifications and responsibilities of a radiation safety officer.
24.23	Express the need and importance of personnel monitoring for radiation workers.
24.24	Describe personnel monitoring devices, including applications, advantages and limitations for each device.
24.25	Interpret personnel monitoring reports.
24.26	Compare values for individual effective dose limits for occupational radiation exposures (annual and lifetime).
24.27	Identify effective dose limits for the embryo and fetus in occupationally exposed women.
24.28	Distinguish between primary and secondary radiation barriers.
24.29	Demonstrate how the operation of various x-ray and ancillary equipment influences radiation safety and describe the potential consequences of equipment failure.
24.30	Perform calculations of exposure with varying time, distance and shielding.
24.31	Discuss the relationship between workload, energy, half-value layer (HVL), tenth-value layer (TVL), use factor and shielding design.

24.32	Identify emergency procedures to be followed during failures of x-ray equipment.
24.33	Demonstrate how time, distance and shielding can be manipulated to keep radiation exposures to a minimum.
24.34	Explain the relationship of beam-limiting devices to patient radiation protection.
24.35	Discuss added and inherent filtration in terms of the effect on patient dosage.
24.36	Explain the purpose and importance of patient shielding.
24.37	Identify various types of patient shielding and state the advantages and disadvantages of each type.
24.38	Use the appropriate method of shielding for a given radiographic or fluoroscopic procedure.
24.39	Explain the relationship of exposure factors to patient dosage.
24.40	Explain how patient position affects dose to radiosensitive organs.
24.41	Identify the appropriate image receptor that will result in an optimum diagnostic image with the minimum radiation exposure to the patient.
24.42	Select the immobilization techniques used to eliminate voluntary motion.
24.43	Describe the minimum source-to-tabletop distances for fixed and mobile fluoroscopic devices.
24.44	Apply safety factors for the patient, health care personnel and family members in the room during radiographic/fluoroscopic procedures.

Course Number: RTE0849
Occupational Completion Point: C
Advanced Clinical Education V – 360 Hours

Advanced Clinical Education V provides an advanced progressive practicum in sequence to *Advanced Clinical Education IV* in which students are expected to apply skills learned in *Fundamentals of Radiologic Technology, Radiographic Procedures I, II and III, Radiographic Imaging I and II,* and all previously sequenced Clinical Education courses. The course objectives in *Advanced Clinical Education V* are repeated from *Clinical Education IV* due to the progressive approach to student competency and proficiency.

The content and clinical practice experiences within the course of *Advanced Clinical Education V* are designed to sequentially develop, apply, critically analyze, integrate, synthesize and evaluate concepts and theories in the performance of radiologic procedures. Through structured, sequential and advanced competency-based clinical assignments, students will consistently demonstrate concepts of team practice; proficiency of skills in patient-centered clinical practice and radiation protection; and professional expertise and conduct that are discussed, examined and evaluated.

Advanced Clinical Education V provides students with advanced practical experiences in patient care and assessment, fosters competent performance of radiologic imaging and impacts total quality management standards. *Advanced Clinical V* includes practice in venipuncture skills

and shadowing in advanced modality imaging. Levels of competency and performance outcomes are measured at six-week intervals. This is designed to ensure the well-being of patients before, during and after performance of radiologic procedures. The evaluative measurement tools provide a mechanism that ensures that program standards of student competency and proficiency have been met.
11.0 Demonstrate the proficiency in the skills and knowledge required of clinical practice. The student will be able to:
11.01 Exercise the priorities required in daily clinical practice.
11.02 Execute medical imaging procedures under the appropriate level of supervision.
11.03 Adhere to team practice concepts that focus on organizational theories, roles of team members and conflict resolution.
11.04 Adapt to changes and varying clinical situations.
11.05 Describe the role of health care team members in responding/reacting to a local or national emergency.
11.06 Provide patient-centered, clinically effective care for all patients regardless of age, gender, disability, special needs, ethnicity or culture.
11.07 Integrate the use of appropriate and effective written, oral and nonverbal communication with patients, the public and members of the health care team in the clinical setting.
11.08 Integrate appropriate personal and professional values into clinical practice.
11.09 Recognize the influence of professional values on patient care.
11.10 Explain how a person's cultural beliefs toward illness and health affect his or her health status.
11.11 Use patient and family education strategies appropriate to the comprehension level of the patient/family.
11.12 Provide desired psychosocial support to the patient and family.
11.13 Demonstrate competent assessment skills through effective management of the patient's physical and mental status.
11.14 Respond appropriately to medical emergencies.
11.15 Examine demographic factors that influence patient compliance with medical care.
11.16 Adapt procedures to meet age-specific, disease-specific and cultural needs of patients.
11.17 Assess the patient and record clinical history.
11.18 Demonstrate basic life support procedures.
11.19 Use appropriate charting/electronic documentation methods.
11.20 Recognize life-threatening electrocardiogram (ECG) tracing.

11.21	Apply standard and transmission-based precautions.
11.22	Apply the appropriate medical asepsis and sterile technique.
11.23	Demonstrate competency in the principles of radiation protection standards.
11.24	Apply the principles of total quality management.
11.25	Report equipment malfunctions.
11.26	Examine procedure orders for accuracy and make corrective actions when applicable.
11.27	Demonstrate safe, ethical and legal practices.
11.28	Integrate the radiographer's practice standards into clinical practice setting.
11.29	Maintain patient confidentiality standards and meet HIPAA requirements.
11.30	Demonstrate the principles of transferring, positioning and immobilizing patients.
11.31	Comply with departmental and institutional response to emergencies, disasters and accidents.
11.32	Differentiate between emergency and non-emergency procedures.
11.33	Adhere to national, institutional and departmental standards, policies and procedures regarding care of patients, providing radiologic procedures and reducing medical errors.
11.34	Select technical factors to produce quality diagnostic images with the lowest radiation exposure possible.
11.35	Critique images for appropriate anatomy, image quality and patient identification.
11.36	Determine corrective measures to improve inadequate images.

Course Number: RTE0939
Occupational Completion Point: C
Radiography Seminar – 153 Hours

Radiography Seminar provides the student a systematic approach to integrating, synthesizing, and evaluating program content knowledge to ensure adequate preparation for meeting the requirements for licensure in radiologic technology. This course provides evaluative assessment tools that aide the student in conveying and demonstrating mastery of the course objectives from all program content:

25.0	Demonstrate proficiency in knowledge and skills required of a licensed radiologic technologist. The student will be able to:
25.01	Summarize the ethics and laws that impact radiologic sciences at both the state and federal levels.

25.02	Describe the relevance of radiologic science as it pertains to the healthcare system.
25.03	Apply a functional knowledge of medical terminology required in radiologic sciences.
25.04	Integrate an understanding of pharmacology and demonstrate venipuncture procedures as it relates to the role of a radiographer.
25.05	Exhibit proficiency in the skills, techniques and knowledge required for image analysis.
25.06	Exhibit proficiency in the skills, techniques and knowledge required to operate imaging equipment.
25.07	Define the principles of imaging and the various factors that contribute to accuracy.
25.08	Apply knowledge and understanding of the structure and function of the human body.
25.09	Demonstrate proficiency in the skills, techniques and knowledge required to perform accurate radiographic procedures.
25.10	Relate an understanding of the concepts and equipment required of digital image acquisition and display.
25.11	Summarize how radiation is produced and the characteristics of different classifications of radiation.
25.12	Identify radiographic pathology.
25.13	Correlate the integral aspects of radiation biology with the role of a radiographer.
25.14	Describe the importance for proper radiation protection and the precautions radiographers should take to prevent unnecessary exposure to themselves and patients.

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as, experimental, quality, and safety procedures are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate and troubleshoot equipment/tools used to make observations. Students understand measurement error; and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

Special Notes

If students in this program are seeking a licensure, certificate or registration through the Department of Health, please refer to 456.0635, F.S. for more information on disqualification for a license, certificate, or registration through the Department of Health.

The program must be accredited by the Joint Review Committee on Education in Radiologic Technology (JRCERT), 20 North Wacker Drive, Suite 900, Chicago, Illinois 60606-2901, (312) 704-5300, or any other appropriate accrediting agency acceptable to the American Registry of Radiologic Technologists (ARRT).

The program must also be approved by the Department of Health, Bureau of Radiation Control so that the graduate is eligible for licensure in Florida as a Certified Radiologic Technologist. As specified in Chapter 468 Part IV, F.S. and Chapter 64E-3, F.A.C.

Radiographers provide patient services using imaging modalities, as directed by physicians qualified to order and/or perform radiologic procedures. Radiographers usually provide patient care essential to radiologic procedures, including exercising judgment when performing medical imaging procedures. When providing patient services, the radiographer adheres to the principles of radiation protection for the patient, self, and others.

Radiographers accurately demonstrate anatomical structures on various imaging receptors by knowledge of anatomy, positioning, radiographic technique, and radiation protection. Radiographers must also be able to recognize emergency patient conditions and initiate lifesaving first aid. Additional duties may include performing quality assurance, processing film, and keeping patient records. Radiographers may be required to perform some of these duties at the patient's bedside or in the operating room.

The policies and process by which students receive clinical education shall be published and made known to all concerned in order to avoid practices in which students are substituted for paid staff. Students shall not take the responsibility or the place of qualified staff. After demonstrating competency, students may be permitted to perform procedures with indirect supervision. Unsatisfactory radiographs shall be repeated only in the presence of a qualified radiographer.

Program completers will be eligible to make an application to take the National Registry examination. For further information contact: American Registry of Radiologic Technologists (ARRT), 1255 Northland Drive, St. Paul, MN 55120-1155, (651) 687-0048.

Students are encouraged to become members of their appropriate professional organizations such as the American Society of Radiologic Technologists (ASRT), Florida Society of Radiologic Technologists (FSRT) and its' local affiliate.

Career and Technical Student Organization (CTSO)

CTSOs are co-curricular career and technical student organizations providing leadership training and reinforcing specific career and technical skills. Career and Technical Student Organizations provide activities for students as an integral part of the instruction offered. Other CTSOs not listed in this curriculum framework or recognized by the Florida Department of Education are permissible provided they support student mastery over the standards and benchmarks of this curriculum framework.

Cooperative Training – OJT

On-the-job training is appropriate but not required for this program. Whenever offered, the rules, guidelines, and requirements specified in the OJT framework apply.

Basic Skills

In Career Certificate programs offered for 450 hours or more, in accordance with Rule 6A-10.040, F.A.C., the minimum basic skills grade levels required for postsecondary adult career and technical students to complete this program are: Computation (Mathematics) and Communications (Reading and Language Arts). These grade level numbers correspond to a grade equivalent score obtained on a state designated basic skills examination.

Adult students with disabilities, as defined in Section 1004.02, Florida Statutes, may be exempted from meeting the Basic Skills requirements (Rule 6A-10.040). Students served in exceptional student education (except gifted) as defined in s. 1003.01, F.S., may also be exempted from meeting the Basic Skills requirement. Each school district and Florida College System Institution must adopt a policy addressing procedures for exempting eligible students with disabilities from the Basic Skills requirement as permitted in Section 1004.91, F.S.

Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

Note: postsecondary curriculum and regulated secondary programs cannot be modified.