

**Florida Department of Education
Curriculum Framework**

Course Title: Arts, A/V Technology and Communication Directed Study
Career Cluster: Arts, A/V Technology and Communication

Secondary – Career Preparatory

Course Number	8200400
CIP Number	0650999910
Grade Level	11-12
Standard Length	Multiple credits
Teacher Certification	Refer to the Course Structure section.
CTSO	SkillsUSA

Purpose

The purpose of this course is to provide students with learning opportunities in a prescribed program of study within the Arts, A/V Technology and Communication cluster that will enhance opportunities for employment in the career field chosen by the student.

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. 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
8200400	Arts, A/V Technology and Communication Directed Study	Any District Certification appropriate to the students' chosen career field	Multiple credits	2	

		ANY FIELD WHEN CERT REFLECTS BACHELOR OR HIGHER ANY CTE FIELD OR COVERAGE			
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(Graduation Requirement Abbreviations- EQ= Equally Rigorous Science, PA= Practical Arts, EC= Economics)

Common Career Technical Core – Career Ready Practices

Career Ready Practices describe the career-ready skills that educators should seek to develop in their students. These practices are not exclusive to a Career Pathway, program of study, discipline or level of education. Career Ready Practices should be taught and reinforced in all career exploration and preparation programs with increasingly higher levels of complexity and expectation as a student advances through a program of study.

1. Act as a responsible and contributing citizen and employee.
2. Apply appropriate academic and technical skills.
3. Attend to personal health and financial well-being.
4. Communicate clearly, effectively and with reason.
5. Consider the environmental, social and economic impacts of decisions.
6. Demonstrate creativity and innovation.
7. Employ valid and reliable research strategies.
8. Utilize critical thinking to make sense of problems and persevere in solving them.
9. Model integrity, ethical leadership and effective management.
10. Plan education and career path aligned to personal goals.
11. Use technology to enhance productivity.
12. Work productively in teams while using cultural/global competence.

Standards

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

- 01.0 Demonstrate expertise in a specific occupation contained within the career cluster.
- 02.0 Conduct investigative research on a selected topic related to the career cluster using approved research methodology, interpret findings, and prepare presentation 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 program of study.

Florida Department of Education
Student Performance Standards

Course Title: Arts, A/V Technology and Communication Directed Study
Course Number: 8200400
Course Credit: 1

CTE Standards and Benchmarks	
01.0	Demonstrate expertise 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 student’s assessed needs.
02.0	Conduct investigative research on a selected topic related to the career cluster using approved research methodology, interpret findings, and prepare presentation 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 test the research.
02.04	Report, 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	Develop and present a professional presentation offering potential solutions to a current issue.
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.
03.04	Enhance written and oral communications through the development of presentations, public speaking, and live and/or virtual interviews.
04.0	Demonstrate higher order critical thinking and reasoning skills appropriate for the selected program of study – the student will be able to:
04.01	Use mathematical and/or scientific skills to solve problems encountered in the chosen occupation.
04.02	Read and interpret information relative to the chosen occupation.
04.03	Locate and evaluate key elements of oral and written information.
04.04	Analyze and apply data and/or measurements to solve problems and interpret documents.

04.05 Construct charts/tables/graphs using functions and 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

MyCareerShines is an interactive resource to assist students in identifying their ideal career and to enhance preparation for employment. Teachers are encouraged to integrate this resource into the program curriculum to meet the employability goals for each student.

Career and Technical Student Organization (CTSO)

SkillsUSA is the intercurricular career and technical student organization(s) 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.

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 Occupational Completion Point (OCP) or a Modified Occupational Completion Point (MOCP). 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 an OCP/MOCP. The student should work on different competencies and new applications of competencies each year toward completion of the OCP/MOCP. 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: Arts, AV Technology and Communication Cooperative Education OJT
Course Type: Career Preparatory
Career Cluster: Arts, AV Technology and Communication

Secondary – Cooperative Education - OJT

Course Number	8200430
CIP Number	06509999CP
Grade Level	9-12
Standard Length	Multiple credits
Teacher Certification	Refer to the <u>Course Structure</u> section.
CTSO	SkillsUSA

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 Arts, AV Technology and Communication 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 Arts, AV Technology and Communication cluster.

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.

Arts, AV Technology and Communication 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
8200430	Arts, A/V Technology and Communication Cooperative Education OJT	ANY FIELD WHEN CERT REFLECTS BACHELOR'S DEGREE OR HIGHER ANY VOCATIONAL FIELD OR MKTG 1 TC COOP ED E G TC WK EXP E G	Multiple Credits	2	

(Graduation Requirement Abbreviations- EQ= Equally Rigorous Science, PA= Practical Arts, EC= Economics)

Common Career Technical Core – Career Ready Practices

Career Ready Practices describe the career-ready skills that educators should seek to develop in their students. These practices are not exclusive to a Career Pathway, program of study, discipline or level of education. Career Ready Practices should be taught and reinforced in all career exploration and preparation programs with increasingly higher levels of complexity and expectation as a student advances through a program of study.

1. Act as a responsible and contributing citizen and employee.
2. Apply appropriate academic and technical skills.
3. Attend to personal health and financial well-being.
4. Communicate clearly, effectively and with reason.
5. Consider the environmental, social and economic impacts of decisions.
6. Demonstrate creativity and innovation.
7. Employ valid and reliable research strategies.
8. Utilize critical thinking to make sense of problems and persevere in solving them.
9. Model integrity, ethical leadership and effective management.
10. Plan education and career path aligned to personal goals.
11. Use technology to enhance productivity.
12. Work productively in teams while using cultural/global competence.

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: Arts, A/V Technology and Communication Cooperative Education OJT
Secondary Number: 8200430

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

There is a **Cooperative Education Manual** available online that has guidelines for students, teachers, employers, parents and other administrators and sample training agreements. It can be accessed on the DOE website.

The occupational standards and benchmarks outlined in this secondary course correlate to the standards and benchmarks of the postsecondary course with the same Classification of Instructional Programs (CIP) number.

MyCareerShines is an interactive resource to assist students in identifying their ideal career and to enhance preparation for employment. Teachers are encouraged to integrate this resource into the program curriculum to meet the employability goals for each student.

Career and Technical Student Organization (CTSO)

SkillsUSA is the intercurricular career and technical student organization(s) 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.

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 may need additional time (beyond the regular school year) to master the student performance standards associated with a regular Occupational Completion Point (OCP) or a Modified Occupational Completion Point (MOCP). 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 an OCP/MOCP. The student should work on different competencies and new applications of competencies each year toward completion of the OCP/MOCP. 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.

Florida Department of Education
Curriculum Framework

Program Title: Digital Cinema Production
Program Type: Career Preparatory
Career Cluster: Arts, A/V Technology and Communication

Secondary – Career Preparatory

Program Number	8201000
CIP Number	0650060211
Grade Level	9-12
Standard Length	7 credits
Teacher Certification	Refer to the <u>Program Structure</u> section.
CTSO	SkillsUSA
SOC Codes (all applicable)	27-2012 – Producers and Directors 27-4011 – Audio and Video Equipment Technicians 27-4031 – Camera Operators, Television, Video, and Motion Picture 27-4032 – Film and Video Editors

Purpose

The purpose of this program is to prepare students for initial employment in the Digital Cinema Production field as equipment operators, camera assistants, sound equipment operators, editing equipment operators, set builders, grips and lighting equipment operators and Visual Effect Artists.

The content should include, but is not be limited to, communication skills, leadership skills, human relations and employability skills, safe and efficient work practices, and preparation to assume responsibility for overall production of digital video activities including: scripts, lighting, camera operation, electronic news gathering, field/studio production, and video editing.

All outcomes must be completed to receive credit for an occupational completion point (OCP). Listed below are the courses that comprise this program when offered at the secondary level.

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 Arts, A/V Technology and Communication 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 Arts, A/V Technology and Communication 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 five 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 secondary program structure:

OCP	Course Number	Course Title	Teacher Certification	Length	SOC Code	Level	Graduation Requirement
A	8201010	Digital Cinema Production 1	TEC ED 1 @ 2 ENG&TEC ED1@2 TV PRO TEC @7 7G	1 credit	27-2012	2	
	8201020	Digital Cinema Production 2		1 credit			
B	8201030	Digital Cinema Production 3		1 credit	27-4011	2	
C	8201040	Digital Cinema Production 4		1 credit	27-4031	2	
	8201050	Digital Cinema Production 5		1 credit		2	
D	8201060	Digital Cinema Production 6		1 credit	27-4032	2	
E	8201070	Digital Cinema Production 7		1 credit	27-2012	2	

(Graduation Requirement Abbreviations- EQ= Equally Rigorous Science, PA= Practical Arts, EC= Economics)

Florida Standards for Technical Subjects

Florida Standards (FS) for English Language Arts and Literacy in History/Social Studies, Science, and Technical Subjects are the critical reading and writing literacy standards designed for grade 6 and above. These standards are predicated on teachers of history/social studies, science, and technical subjects using their content area expertise to help students meet the particular challenges of reading, writing, speaking, listening, and language in their respective fields. The FS for Mathematical Practices are designed for grades K-12 and describe varieties of expertise that educators at all levels should seek to develop in their students. These practices rest on important “processes and proficiencies” with longstanding importance in mathematics education.

Instructors must incorporate the Florida Standards for Technical Subjects and Mathematical Practices throughout instruction of this CTE program.

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.

Common Career Technical Core – Career Ready Practices

Career Ready Practices describe the career-ready skills that educators should seek to develop in their students. These practices are not exclusive to a Career Pathway, program of study, discipline or level of education. Career Ready Practices should be taught and reinforced in all career exploration and preparation programs with increasingly higher levels of complexity and expectation as a student advances through a program of study.

1. Act as a responsible and contributing citizen and employee.
2. Apply appropriate academic and technical skills.
3. Attend to personal health and financial well-being.
4. Communicate clearly, effectively and with reason.
5. Consider the environmental, social and economic impacts of decisions.
6. Demonstrate creativity and innovation.
7. Employ valid and reliable research strategies.
8. Utilize critical thinking to make sense of problems and persevere in solving them.
9. Model integrity, ethical leadership and effective management.
10. Plan education and career path aligned to personal goals.
11. Use technology to enhance productivity.
12. Work productively in teams while using cultural/global competence.

Standards

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

- 01.0 Understand the history of cinema.
- 02.0 Understand the production process.
- 03.0 Understand intellectual property rights, copyright laws and plagiarism as each applies to creative assets.
- 04.0 Demonstrate proficiency in computer skills.
- 05.0 Demonstrate knowledge of photo editing software.
- 06.0 Demonstrate a knowledge of production writing as it relates to narrative filmmaking.
- 07.0 Demonstrate knowledge of production management.
- 08.0 Demonstrate knowledge of art direction.
- 09.0 Demonstrate knowledge of character development.
- 10.0 Demonstrate knowledge of storyboarding.
- 11.0 Demonstrate knowledge of funding presentations and pitches.
- 12.0 Demonstrate understanding of lighting principles.
- 13.0 Demonstrate understanding of production set protocol.
- 14.0 Demonstrate understanding of lighting fixtures.
- 15.0 Demonstrate understanding of electricity.
- 16.0 Demonstrate understanding of special effects lighting techniques and equipment.
- 17.0 Demonstrate understanding of grip principles.
- 18.0 Demonstrate understanding of basic grip equipment.
- 19.0 Demonstrate understanding of dollies.
- 20.0 Demonstrate understanding of cranes, jibs and arms.
- 21.0 Demonstrate knowledge of cinematography.
- 22.0 Demonstrate knowledge of cameras.
- 23.0 Demonstrate basic audio production.
- 24.0 Interpret and implement audio requirements for film production.
- 25.0 Formulate strategies for audio recording and playback.
- 26.0 Demonstrate knowledge of the post-production process.
- 27.0 Demonstrate knowledge of video editing software.
- 28.0 Demonstrate knowledge of audio editing software.
- 29.0 Demonstrate knowledge of DVD authoring software.
- 30.0 Demonstrate knowledge of color-correction software.
- 31.0 Demonstrate knowledge of compositing software.
- 32.0 Demonstrate knowledge of stereography.

Florida Department of Education
Student Performance Standards

Course Title: Digital Cinema Production 1
Course Number: 8201010
Course Credit: 1

Course Description:

This course covers competencies in the history of cinema, production process, intellectual property rights, computer skills, photo editing software and production writing.

Abbreviations:

FS-M/LA = Florida Standards for Math/Language Arts
NGSSS-Sci = Next Generation Sunshine State Standards for Science

Note: This course is pending alignment in the following categories: FS-M/LA and NGSSS-Sci.

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
01.0 Understand the history of cinema – the student will be able to:		
01.01 Understand the history of cinema (silent, sound, color).		
02.0 Understand the production process – the student will be able to:		
02.01 Identify the job titles associated with the filmmaking process.		
02.02 Identify various tools and equipment used to produce narrative productions.		
02.03 Understand speed and efficiency concepts.		
02.04 Understand a production pipeline.		
02.05 Identify the departments of a production studio.		
02.06 Understand the interrelationships between departments.		
02.07 Understand basic communication concepts (verbal, memos, paperwork).		
02.08 Identify the stages of production.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
02.09 Understand studio terms and jargon.		
02.10 Create and organize production paperwork into production bibles or prepare for presentations.		
02.11 Demonstrate the proper use of standard filmmaking forms.		
03.0 Understand intellectual property rights, copyright laws and plagiarism as each applies to creative assets – the student will be able to:		
03.01 Understand the limits and expectations of copyright protection.		
03.02 Understand the concepts of “fair use” and “fair dealing.”		
03.03 Understand the transfer and licensing of creative works.		
03.04 Understand the use of “exclusive rights” to intellectual creations.		
03.05 Demonstrate the use of digital watermarking.		
04.0 Demonstrate proficiency in computer skills -- the student will be able to:		
04.01 Identify all computer parts.		
04.02 Demonstrate understanding of computer performance specifications.		
04.03 Compare and contrast differences between business machines and workstations.		
04.04 Demonstrate best practices of computer safety and ergonomics.		
04.05 Demonstrate understanding of operating systems.		
04.06 Perform software installation and setup.		
04.07 Perform peripheral device installation and setup.		
04.08 Perform computer upgrades (memory/hard disk/cards).		
04.09 Perform storage management operations (project/file).		
04.10 Demonstrate knowledge of computer maintenance.		
04.11 Demonstrate ability to troubleshoot computer hardware and software issues.		
05.0 Demonstrate knowledge of photo editing software – the student will be able to:		
05.01 Demonstrate understanding of file formats and storage options.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
05.02 Identify parts of the software interface (menus/palettes).		
05.03 Demonstrate ability to use each of the basic tool sets.		
05.04 Demonstrate ability to import, export and save images.		
05.05 Demonstrate understanding of layers and channels.		
05.06 Demonstrate understanding of filters, effects and plug-ins.		
05.07 Demonstrate understanding of file presets.		
05.08 Demonstrate ability to select portions of an image for manipulation.		
05.09 Demonstrate ability to transform selections and images (crop, scale).		
05.10 Demonstrate ability to color-correct images (brightness, hue, contrast).		
05.11 Demonstrate ability to use brushes for image creation and correction.		
05.12 Understand non-destructive and destructive operations.		
05.13 Demonstrate the basic use of video in photo editing software.		
05.14 Design and print a business card.		
06.0 Demonstrate knowledge of production writing as it relates to narrative filmmaking – the student will be able to:		
06.01 Understand the job of a scriptwriter.		
06.02 Identify target audiences, markets, and demographics.		
06.03 Identify the elements of a script.		
06.04 Develop the intended message of a script.		
06.05 Demonstrate ability to write a treatment.		
06.06 Demonstrate ability to write a professionally formatted (submission) script.		
06.07 Identify the genre of a story.		
06.08 Define characters and setting for a story.		

Florida Department of Education
Student Performance Standards

Course Title: Digital Cinema Production 2
Course Number: 8201020
Course Credit: 1

Course Description:

This course covers competencies in production management, art direction, character development, storyboarding, and funding presentations and pitches.

Abbreviations:

FS-M/LA = Florida Standards for Math/Language Arts
NGSSS-Sci = Next Generation Sunshine State Standards for Science

Note: This course is pending alignment in the following categories: FS-M/LA and NGSSS-Sci.

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
07.0 Demonstrate knowledge of production management – the student will be able to:		
07.01 Demonstrate ability to break down a script into production elements (cast, props).		
07.02 Understand the job of a production manager.		
07.03 Create a production board.		
07.04 From a script - create a budget (quote) from local vendors.		
07.05 Demonstrate the ability to write a casting call.		
07.06 Participate in the casting process.		
07.07 Scout a location and perform a site survey.		
07.08 Acquire a permit for shooting on location.		
08.0 Demonstrate knowledge of art direction – the student will be able to:		
08.01 Develop the overall visual appearance of an animation.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
08.02 Demonstrate the ability to create moods with style.		
08.03 Determine the geographic location and time period of the story.		
08.04 Understand the importance of art direction as it pertains to the message.		
08.05 Understand the use of color in art direction.		
08.06 Document the technical aspects of art direction for use in production.		
08.07 Perform the various assignments in a professional manner according to industry standards.		
09.0 Demonstrate knowledge of character development – the student will be able to:		
09.01 Demonstrate an understanding of character profiles.		
09.02 Demonstrate the ability to develop character résumés/profiles.		
10.0 Demonstrate knowledge of storyboarding – the student will be able to:		
10.01 Demonstrate understanding of visual storytelling and how storyboards are used during production.		
10.02 Identify common aspect ratios and how to calculate ratios.		
10.03 Demonstrate understanding of camera framing and camera movement.		
10.04 Develop a visual style using art direction.		
10.05 Break down a script into the various camera shots and character actions.		
10.06 Demonstrate understanding of perspective and depth of field.		
10.07 Demonstrate knowledge of lighting and color use.		
10.08 Demonstrate ability to sketch a storyboard, including characters.		
10.09 Demonstrate ability to use storyboarding software or illustration software.		
10.10 Demonstrate the ability to create slides (storyboard thumbnail pages).		
11.0 Demonstrate knowledge of funding presentations and pitches – the student will be able to:		
11.01 Understand the network associated with product distribution.		
11.02 Identify the job titles and roles of the distributors.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
11.03 Identify potential markets, target audiences, and products.		
11.04 Develop the materials needed to effectively convey the message.		
11.05 Effectively communicate a message or pitch.		
11.06 Attend an educational seminar outside of class.		
11.07 Attend a film festival.		
11.08 Acquire a domain name.		
11.09 Understand the process of incorporating a business.		

Florida Department of Education
Student Performance Standards

Course Title: Digital Cinema Production 3
Course Number: 8201030
Course Credit: 1

Course Description:

This course covers competencies in lighting principles, production set protocol, lighting fixtures, electricity, special effects lighting, grips, dollies and cranes, jibs and arms.

Abbreviations:

FS-M/LA = Florida Standards for Math/Language Arts
NGSSS-Sci = Next Generation Sunshine State Standards for Science

Note: This course is pending alignment in the following categories: FS-M/LA and NGSSS-Sci.

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
12.0 Demonstrate understanding of lighting principles – the student will be able to:		
12.01 Identify the descriptions of the lighting crew.		
12.02 Identify relevant lighting cues from production notes.		
12.03 Create a lighting plan based on production notes.		
12.04 Demonstrate understanding of foot-candles.		
12.05 Demonstrate understanding of F-Stops, ISO/ASA and gain.		
12.06 Demonstrate understanding of depth of field (DOF).		
12.07 Demonstrate understanding of contrast ratio.		
12.08 Demonstrate color theory and correction.		
12.09 Demonstrate use of a light meter.		
12.10 Understand the photographic lighting principle.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
12.11 Analyze production requirements to determine lighting equipment needs.		
13.0 Demonstrate understanding of production set protocol – the student will be able to		
13.01 Demonstrate ability to stage an area for lights.		
13.02 Demonstrate ability to set lights.		
13.03 Demonstrate ability to use common hand and radio signals.		
13.04 Demonstrate ability to wrap a cable.		
13.05 Demonstrate proper cabling methods (layout/securing).		
13.06 Demonstrate proper cable labeling methods.		
13.07 Demonstrate safety.		
13.08 Differentiate the working relationships that exist between various participants involved in the filmmaking process.		
13.09 Perform as a member of a technical team within the framework of an organized production.		
13.10 Create a safe working environment.		
14.0 Demonstrate understanding of lighting fixtures – the student will be able to:		
14.01 Demonstrate understanding of tungsten lights.		
14.02 Demonstrate use of Fresnel, area, and open-faced lights.		
14.03 Demonstrate understanding of PAR lights.		
14.04 Demonstrate understanding of HMI lights.		
14.05 Demonstrate understanding of fluorescent lights.		
14.06 Demonstrate understanding of LED lights.		
14.07 Demonstrate an understanding of ambient and practical lighting.		
15.0 Demonstrate understanding of electricity – the student will be able to:		
15.01 Demonstrate understanding of electrical units of measure.		
15.02 Calculate amperage of lights.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
15.03 Demonstrate understanding of Ohm's Law.		
15.04 Demonstrate use of circuit protection.		
15.05 Understand types of distribution circuits (direct current or alternating current).		
15.06 Demonstrate understanding of single- and three-phase systems.		
15.07 Demonstrate use of proper grounding techniques.		
15.08 Demonstrate use of a voltmeter.		
15.09 Demonstrate use of portable and full-size generators.		
16.0 Demonstrate understanding of special effects lighting techniques and equipment – the student will be able to:		
16.01 Understand lightning effects.		
16.02 Understand the challenges of lighting a green/blue screen.		
16.03 Demonstrate the proper use of fog machines.		
16.04 Demonstrate both high-key and low-key lighting techniques.		
16.05 Demonstrate how to incorporate lighting into exterior day setups.		
16.06 Supervise hanging, circuiting, and focusing lights for production.		
16.07 Demonstrate use of gels and diffusions.		
16.08 Demonstrate use of neutral density filters.		
16.09 Demonstrate use of daylight conversion filters.		
17.0 Demonstrate understanding of grip principles – the student will be able to:		
17.01 Identify the descriptions of the grip crew.		
17.02 Translate script needs into creative uses of dollies, cranes and other camera mounts as required for production.		
17.03 Identify relevant grip cues from production notes.		
17.04 Analyze production requirements to determine grip equipment needs.		
17.05 Demonstrate proper and safe use of equipment.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
17.06 Appraise maintenance needs for equipment.		
18.0 Demonstrate understanding of basic grip equipment – the student will be able to:		
18.01 Demonstrate proper use of stands and stand extensions.		
18.02 Demonstrate use of small and large butterflies.		
18.03 Demonstrate proper use of sandbags.		
18.04 Demonstrate use of apple boxes and risers.		
18.05 Demonstrate ability to identify and use clamps and clips.		
18.06 Demonstrate ability to use specialty knots (bowline, clove hitch, square).		
18.07 Demonstrate ability to identify and use flags, dots, and fingers.		
18.08 Demonstrate ability to identify and use silks and nets.		
18.09 Demonstrate ability to identify and use reflectors and bounce boards.		
19.0 Demonstrate understanding of dollies – the student will be able to:		
19.01 Demonstrate understanding of dolly uses and limitations.		
19.02 Demonstrate understanding of dolly safety.		
19.03 Identify commonly used dolly types and manufacturers.		
19.04 Demonstrate ability to assemble dollies.		
19.05 Demonstrate effective use of track dollies during production.		
20.0 Demonstrate understanding of cranes, jibs and arms – the student will be able to:		
20.01 Demonstrate understanding of crane, jib and arm uses and limitations.		
20.02 Demonstrate understanding of crane, jib and arm safety.		
20.03 Demonstrate ability to assemble cranes, jibs, and arms.		
20.04 Identify commonly used crane, jib and arm types and manufacturers.		
20.05 Demonstrate effective use of cranes, jibs, and arms during a production.		

Florida Department of Education
Student Performance Standards

Course Title: Digital Cinema Production 4
Course Number: 8201040
Course Credit: 1

Course Description:

This course covers competencies in cinematography and use of cameras.

Abbreviations:

FS-M/LA = Florida Standards for Math/Language Arts

NGSSS-Sci = Next Generation Sunshine State Standards for Science

Note: This course is pending alignment in the following categories: FS-M/LA and NGSSS-Sci.

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
21.0 Demonstrate knowledge of cinematography – the student will be able to:		
21.01 Identify the psychological effects of different types of angles (composition).		
21.02 Analyze a script for camera lens and shot requirements.		
21.03 Demonstrate understanding of different responsibilities within the camera department.		
21.04 Demonstrate knowledge of camera blocking and screen direction.		
21.05 Design a lighting plot.		
21.06 Understand the principals of photography.		
21.07 Compare the techniques used in film and video production.		
21.08 Manage resources and personnel in order to meet production deadlines.		
22.0 Demonstrate knowledge of cameras – the student will be able to:		
22.01 Demonstrate knowledge of mechanics and parts of a camera (shutter, f/stops, lenses, etc.).		
22.02 Analyze the aesthetic needs of a shot and accomplish them by using standard industry equipment.		

CTE Standards and Benchmarks	FS-M/LA	NGSS-Sci
22.03 Analyze production requirements to determine camera equipment needs.		
22.04 Understand the difference between zoom and prime lenses and understand lens speeds.		
22.05 Program and use a light meter for taking spot, reflected, and incident readings.		
22.06 Demonstrate the proper use of filters and polarizers.		
22.07 Control lens, focal length, aperture and exposure to obtain required effects.		
22.08 Control camera movement to obtain required effects.		
22.09 Perform basic routine, preventive and repair maintenance on video equipment.		
22.10 Define various recording formats and media.		
22.11 Define appropriate digital compression and signal (file) types.		

Florida Department of Education
Student Performance Standards

Course Title: Digital Cinema Production 5
Course Number: 8201050
Course Credit: 1

Course Description:

This course covers competencies in basic audio production, interpreting audio requirements for film production, and formulating strategies for audio recording and playback.

Abbreviations:

FS-M/LA = Florida Standards for Math/Language Arts
NGSSS-Sci = Next Generation Sunshine State Standards for Science

Note: This course is pending alignment in the following categories: FS-M/LA and NGSSS-Sci.

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
23.0 Demonstrate basic audio production – the student will be able to:		
23.01 Demonstrate how to set up a recording environment.		
23.02 Demonstrate understanding of digital audio recording hardware.		
23.03 Demonstrate understanding of the proper use of microphones.		
23.04 Demonstrate knowledge of audio codecs and media.		
23.05 Understand the history of Foley and sound effects production.		
23.06 Demonstrate the ability to record location sounds.		
24.0 Interpret and implement audio requirements for film production – the student will be able to:		
24.01 Formulate sound design for required sound effects and dialogue replacement to complete a motion picture soundtrack.		
24.02 Record dialogue replacement lines.		
24.03 Record live sound effects.		

CTE Standards and Benchmarks	FS-M/LA	NGSS-Sci
25.0 Formulate strategies for audio recording and playback – the student will be able to:		
25.01 Demonstrate the use of microphones, recorders, speakers, mixers, boom poles, and other recording and playback equipment.		
25.02 Demonstrate basic knowledge of acoustics.		
25.03 Evaluate recording needs.		
25.04 Evaluate technical resources as appropriate to given spaces.		
25.05 Configure and operate sound recording and playback systems to meet performance needs.		
25.06 Analyze various audio qualities to achieve proper sound mix on an audio mixer.		
25.07 Design a plot for proper microphone placement.		

Florida Department of Education
Student Performance Standards

Course Title: Digital Cinema Production 6
Course Number: 8201060
Course Credit: 1

Course Description:

This course covers competencies in post-production, video editing software, audio editing software, and DVD authoring software.

Abbreviations:

FS-M/LA = Florida Standards for Math/Language Arts
NGSSS-Sci = Next Generation Sunshine State Standards for Science

Note: This course is pending alignment in the following categories: FS-M/LA and NGSSS-Sci.

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
26.0 Demonstrate knowledge of the post-production process – the student will be able to:		
26.01 Identify the psychological effects of different types of edits.		
26.02 Demonstrate understanding of picture and sound editing techniques (e.g., continuity, screen direction, and transitions).		
26.03 Sync dailies by synchronizing sound elements to picture elements.		
26.04 Formulate sound design for required sound effects and dialogue replacement to complete a motion picture soundtrack.		
26.05 Create sound effects using live Foley techniques.		
26.06 Edit and synchronize pre-recorded sound effects in sync with picture.		
27.0 Demonstrate knowledge of video editing software – the student will be able to:		
27.01 Demonstrate understanding of file formats and storage options.		
27.02 Identify parts of the software interface (menus/palettes).		
27.03 Demonstrate ability to use each of the basic tool sets.		
27.04 Demonstrate ability to import, export, and save video projects.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
27.05 Demonstrate understanding of layers and compositing.		
27.06 Demonstrate understanding of filters, effects and plug-ins.		
27.07 Demonstrate understanding of file presets.		
27.08 Demonstrate understanding of the rendering process.		
27.09 Demonstrate ability to transform video (crop, scale).		
27.10 Demonstrate ability to color-correct images (brightness, hue, contrast).		
27.11 Demonstrate ability to use brushes for image creation and correction.		
27.12 Understand non-destructive and destructive operations.		
27.13 Understand principles of stereo-editing.		
28.0 Demonstrate knowledge of audio editing software – the student will be able to:		
28.01 Demonstrate understanding of file formats and storage options.		
28.02 Identify parts of the software interface (menus/palettes).		
28.03 Demonstrate ability to use each of the basic tool sets.		
28.04 Demonstrate ability to import, export and save audio.		
28.05 Demonstrate understanding of multiple tracks.		
28.06 Demonstrate understanding of filters, effects and plug-ins.		
28.07 Demonstrate understanding of file presets.		
28.08 Demonstrate understanding of the audio rendering process.		
28.09 Demonstrate ability to edit, cut, and delete.		
28.10 Understand non-destructive and destructive operations.		
28.11 Transfer location sound from location recording format to display format.		
28.12 Synchronize sound elements to picture elements.		
28.13 Demonstrate basic sound-editing skills.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
28.14 Mix multiple tracks of dialogue, sound effects, and music into a finished soundtrack according to industry quality standards.		
29.0 Demonstrate knowledge of DVD authoring software – the student will be able to:		
29.01 Identify parts of the software interface (menus/palettes).		
29.02 Demonstrate ability to use each of the basic tool sets.		
29.03 Understand mapping to design menu layouts and navigation.		
29.04 Demonstrate ability to import media (stills, video, and audio).		
29.05 Demonstrate ability to create chapters.		
29.06 Understand the process of encoding and compression.		
29.07 Author and burn a DVD demo reel.		

Florida Department of Education
Student Performance Standards

Course Title: Digital Cinema Production 7
Course Number: 8201070
Course Credit: 1

Course Description:

This course covers competencies in color correction software, composition software, and stereography.

Abbreviations:

FS-M/LA = Florida Standards for Math/Language Arts
 NGSSS-Sci = Next Generation Sunshine State Standards for Science

Note: This course is pending alignment in the following categories: FS-M/LA and NGSSS-Sci.

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
30.0 Demonstrate knowledge of color-correction software – the student will be able to:		
30.01 Identify parts of the software interface (menus/palettes).		
30.02 Demonstrate ability to use each of the basic tool sets.		
30.03 Demonstrate ability to import, export and save video.		
30.04 Understand color balance, color theory, and channels.		
30.05 Demonstrate ability to create masks and mattes.		
30.06 Understand the use and operation of scopes and waveforms.		
30.07 Demonstrate how to calibrate a monitor.		
30.08 Understand the process of color grading.		
30.09 Demonstrate tracking as it relates to color correction.		
30.10 Demonstrate the process to render and output color-corrected content.		
31.0 Demonstrate knowledge of compositing software – the student will be able to:		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
31.01 Identify parts of the software interface (menus/palettes).		
31.02 Demonstrate ability to use each of the basic tool sets.		
31.03 Demonstrate ability to import, export and save video.		
31.04 Understand basic animation using effects presets.		
31.05 Demonstrate ability to animate text and layers.		
31.06 Understand the use of rotoscoping tools.		
31.07 Demonstrate how to animate masks.		
31.08 Understand the process of color correction.		
31.09 Demonstrate both single point and multipoint motion tracking.		
31.10 Demonstrate the process to render and output content.		
32.0 Demonstrate knowledge of stereography – the student will be able to:		
32.01 Understand the challenges and limitations of stereography (3D photography).		
32.02 Demonstrate an understanding of a 3D workflow.		
32.03 Demonstrate understanding of parallax and convergence.		
32.04 Demonstrate an understanding of inter-axial/inter-pupillary distance.		
32.05 Demonstrate an understanding of 3D eyewear (polarized, active shutter, and anaglyph).		
32.06 Demonstrate the compositing integration of rendered 3D animation with video.		

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 occupational standards and benchmarks outlined in this secondary program correlate to the standards and benchmarks of the postsecondary program with the same Classification of Instructional Programs (CIP) number.

MyCareerShines is an interactive resource to assist students in identifying their ideal career and to enhance preparation for employment. Teachers are encouraged to integrate this resource into the program curriculum to meet the employability goals for each student.

Career and Technical Student Organization (CTSO)

SkillsUSA is the intercurricular career and technical student organization(s) 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.

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 Occupational Completion Point (OCP) or a Modified Occupational Completion Point (MOCP). 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 an OCP/MOCP. The student should work on different competencies and new applications of competencies each year toward completion of the OCP/MOCP. 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: Digital Media/Multimedia Design
Program Type: Career Preparatory
Career Cluster: Arts, A/V Technology and Communication

Secondary – Career Preparatory

Program Number	8201200
CIP Number	0609070208
Grade Level	9-12
Standard Length	7 credits
Teacher Certification	Refer to the <u>Program Structure</u> section.
CTSO	SkillsUSA
SOC Codes (all applicable)	27-1014 – Multimedia Artists and Animators

Purpose

The purpose of this program is to prepare students for work as multimedia artists and animators.

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 Arts, A/V Technology and Communication 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 Arts, A/V Technology and Communication career cluster.

The content includes, but is not limited to, practical experiences in webpage design and interactive presentation development, testing and production. Specialized skills in multimedia presentations such as video editing, audio features, and simple animation and authoring software are used to produce a variety of interactive multimedia presentations.

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 four 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 secondary program structure:

OCP	Course Number	Course Title	Teacher Certification	Length	SOC Code	Level	Graduation Requirement
A	8201210	Digital Media/Multimedia Foundations 1	BUS ED 1 @2 COMM ART @7 7G	1 credit	27-1014	2	PA
B	8201220 8201230	Digital Media/Multimedia Foundations 2 Digital Media/Multimedia Foundations 3	COMPU SCI 6 DIGI MEDIA 7G	1 credit 1 credit	27-1014	2 3	PA
C	8201240 8201250	Digital Media/Multimedia Foundations 4 Digital Media/Multimedia Foundations 5	PRINTING @7 7G SECRETAR 7 G	1 credit 1 credit	27-1014	3 3	PA PA
D	8201260 8201270	Digital Media/Multimedia Foundations 6 Digital Media/Multimedia Foundations 7	TEC ED 1 @2 ENG&TEC ED1@2 TEC ELEC @7 TV PRO TEC @7 7G VOE @7	1 credit 1 credit	27-1014	3 3	PA PA

(Graduation Requirement Abbreviations- EQ= Equally Rigorous Science, PA= Practical Arts, EC= Economics)

Academic Alignment Tables

Academic alignment is an ongoing, collaborative effort of professional educators specializing in the fields of science, mathematics, English/language arts, and Career and Technical Education (CTE). This initiative supports CTE programs by improving student performance through the integration of academic content within CTE courses. Career and Technical Education courses that have been aligned to the Next Generation Sunshine State Standards for Science and the Florida Standards for Mathematics and English/Language Arts will show the following data: the quantity of academic standards in the CTE course; the total number of standards contained in the academic course; and the percentage of alignment to the CTE course.

Courses	Anatomy/ Physiology Honors	Astronomy Solar/Galactic Honors	Biology 1	Chemistry 1	Earth- Space Science	Environmental Science	Genetics	Integrated Science	Marine Science 1 Honors	Physical Science	Physics 1
8201210	#	1/80 1%	19/83 23%	1/69 1%	20/67 30%	#	#	19/82 23%	#	20/74 27%	2/72 3%
8201220	19/87 22%	20/80 25%	#	20/69 29%	1/67 1%	19/70 27%	19/69 28%	#	14/66 21%	1/74 1%	21/72 29%
8201230	19/87 22%	20/80 25%	#	20/69 29%	1/67 1%	19/70 27%	19/69 28%	#	14/66 21%	1/74 1%	21/72 29%
8201240	20/87 23%	20/80 25%	1/83 1%	20/69 29%	1/67 1%	20/70 29%	20/69 29%	1/82 1%	15/66 23%	1/74 1%	20/72 28%
8201250	1/87 1%	1/80 1%	1/83 1%	1/69 1%	1/67 1%	1/70 1%	1/69 1%	1/82 1%	1/66 2%	1/74 1%	1/72 1%
8201260	1/87 1%	2/80 3%	1/83 1%	1/69 1%	1/67 1%	1/70 1%	1/69 1%	1/82 1%	1/66 2%	2/74 3%	2/72 3%
8201270	2/87 2%	2/80 3%	2/83 2%	2/69 3%	2/67 3%	2/70 3%	2/69 3%	2/82 2%	2/66 3%	2/74 3%	2/72 3%

** Alignment pending review

Alignment attempted, but no correlation to academic course

Courses	Algebra 1	Algebra 2	Geometry	English 1	English 2	English 3	English 4
8201210	14/67 21%	8/75 11%	9/54 35%	2/46 4%	2/45 4%	2/45 4%	2/45 4%
8201220	9/67 13%	15/75 20%	9/54 17%	1/46 2%	1/45 2%	1/45 2%	1/45 2%
8201230	8/67 12%	14/75 19%	8/54 15%	1/46 2%	1/45 2%	1/45 2%	1/45 2%
8201240	8/67 12%	14/75 19%	14/54 26%	2/46 4%	2/45 4%	2/45 4%	2/45 4%
8201250	#	#	#	#	#	#	#
8201260	1/67 1%	1/75 1%	1/54 2%	3/46 7%	3/45 7%	3/45 7%	3/45 7%
8201270	1/67 1%	1/75 1%	1/54 2%	1/46 2%	1/45 2%	1/45 2%	1/45 2%

** Alignment pending review

Alignment attempted, but no correlation to academic course

Florida Standards for Technical Subjects

Florida Standards (FS) for English Language Arts and Literacy in History/Social Studies, Science, and Technical Subjects are the critical reading and writing literacy standards designed for grade 6 and above. These standards are predicated on teachers of history/social studies, science, and technical subjects using their content area expertise to help students meet the particular challenges of reading, writing, speaking, listening, and language in their respective fields. The FS for Mathematical Practices are designed for grades K-12 and describe varieties of expertise that educators at all levels should seek to develop in their students. These practices rest on important “processes and proficiencies” with longstanding importance in mathematics education.

Instructors must incorporate the Florida Standards for Technical Subjects and Mathematical Practices throughout instruction of this CTE program.

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.

Common Career Technical Core – Career Ready Practices

Career Ready Practices describe the career-ready skills that educators should seek to develop in their students. These practices are not exclusive to a Career Pathway, program of study, discipline or level of education. Career Ready Practices should be taught and reinforced in all career exploration and preparation programs with increasingly higher levels of complexity and expectation as a student advances through a program of study.

1. Act as a responsible and contributing citizen and employee.
2. Apply appropriate academic and technical skills.
3. Attend to personal health and financial well-being.
4. Communicate clearly, effectively and with reason.
5. Consider the environmental, social and economic impacts of decisions.
6. Demonstrate creativity and innovation.
7. Employ valid and reliable research strategies.
8. Utilize critical thinking to make sense of problems and persevere in solving them.
9. Model integrity, ethical leadership and effective management.
10. Plan education and career path aligned to personal goals.
11. Use technology to enhance productivity.
12. Work productively in teams while using cultural/global competence.

Standards

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

- 01.0 Demonstrate knowledge of presentation production issues.
- 02.0 Demonstrate basic computer knowledge.
- 03.0 Demonstrate knowledge of digital still photography.
- 04.0 Demonstrate knowledge of photo editing software.
- 05.0 Demonstrate proficiency in advanced design.
- 06.0 Demonstrate understanding of color modes.
- 07.0 Demonstrate proficiency in using fonts for advanced design.
- 08.0 Demonstrate proficiency in using illustration software.
- 09.0 Demonstrate knowledge of design layout software.
- 10.0 Demonstrate proficiency in using presentation software and equipment to produce a complex presentation.
- 11.0 Demonstrate proficiency in webpage design.
- 12.0 Demonstrate understanding of HTML and CSS.
- 13.0 Demonstrate proficiency in authoring software for webpage design.
- 14.0 Demonstrate proficiency in animated webpage design.
- 15.0 Demonstrate understanding of object-oriented scripting and website animation.
- 16.0 Demonstrate proficiency in the use of interactive design software for webpage design, interactive presentations and banners.
- 17.0 Demonstrate proficiency using video editing software and equipment.
- 18.0 Develop proficiency in using authoring software.
- 19.0 Demonstrate proficiency using all media to create an advertising campaign.
- 20.0 Participate in work-based learning experiences.
- 21.0 Apply job readiness, career planning and job seeking skills to meet personal and professional goals.

**Florida Department of Education
Student Performance Standards**

Course Title: Digital Media/Multimedia Foundations 1
Course Number: 8201210
Course Credit: 1

Course Description:

This course provides competencies in presentation production issues, basic computer knowledge, digital still photography, and photo editing software.

Abbreviations:

FS-M/LA = Florida Standards for Math/Language Arts
 NGSSS-Sci = Next Generation Sunshine State Standards for Science

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
01.0 Demonstrate knowledge of presentation production issues – the student will be able to:		
01.01 Identify characteristics of design for digital media (e.g., web, animation, video, audio).	LAFS.910.L.3.6 LAFS.1112.L.3.6	
01.02 Identify presentation materials (slides, handouts) and presentation marketing formats (social media, print media, newspaper, billboards, posters, magazines, television, movies, computer presentations, interactive CD-ROM, kiosks, webpages).	LAFS.910.L.3.6 LAFS.1112.L.3.6	
01.03 Identify design characteristics (e.g., fonts, size, color modes, backgrounds) that are suited for each type of design format and material.	LAFS.910.L.3.6 LAFS.1112.L.3.6	
01.04 Demonstrate knowledge of copyright laws (e.g., copyright statutes, disclaimers, filing procedures).	LAFS.910.L.3.6 LAFS.1112.L.3.6	
01.05 Research and identify job titles and skills needed for career positions in multimedia design using information from the U.S. Bureau of Labor Statistics.	LAFS.910.RI.4.10 LAFS.1112.RI.4.10	
01.06 Demonstrate understanding of multimedia file formats (e.g., EPS, PDF, TIFF, JPEG, PNG, ASCII, MPEG, MIDI, AVI, WAV) and knowledge of image size when scanning and saving files for use in different design types (print, web, computer, television, mobile devices).		
01.07 Demonstrate knowledge of presentation vocabulary and terms.	LAFS.910.L.3.6 LAFS.1112.L.3.6	
02.0 Demonstrate basic computer knowledge – the student will be able to:		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
02.01 Identify basic computer components (e.g., CPU, monitor, keyboard, resolution).	LAFS.910.L.3.6 LAFS.1112.L.3.6	
02.02 Demonstrate understanding of computer specifications.		
02.03 Demonstrate best practices of computer safety and ergonomics.		
02.04 Demonstrate knowledge of computer operating systems and platforms.		
02.05 Demonstrate use of internal and external drives/storage and data backup.		
02.06 Identify possible software and hardware malfunctions and perform basic troubleshooting operations.		
02.07 Identify characteristics of software for print, photography, web, animation, video and audio.		
03.0 Demonstrate knowledge of digital still photography – the student will be able to:		
03.01 Demonstrate knowledge of digital camera types and uses.	LAFS.910.L.3.6 LAFS.1112.L.3.6	
03.02 Demonstrate knowledge of digital photography composition.	LAFS.910.L.3.6 LAFS.1112.L.3.6	
03.03 Demonstrate knowledge of digital camera supports (e.g., tripod, grips, holds).	LAFS.910.L.3.6 LAFS.1112.L.3.6	
03.04 Identify parts of a digital camera (e.g., lens, sensor, battery).	LAFS.910.L.3.6 LAFS.1112.L.3.6	
03.05 Understand digital camera menus and navigation.		
03.06 Demonstrate knowledge of auto modes and settings (e.g., F-stops, speed, ISO).	LAFS.910.L.3.6 LAFS.1112.L.3.6	
03.07 Demonstrate knowledge of manual modes and settings (e.g., F-stops, speed, ISO).	LAFS.910.L.3.6 LAFS.1112.L.3.6	
03.08 Demonstrate understanding of white balance and lighting.		
03.09 Demonstrate proper care, use, and storage of digital cameras.		
03.10 Create both a digital and printed photography portfolio that includes portraits and landscapes in studio and field settings.		
04.0 Demonstrate knowledge of photo editing software – the student will be able to:		
04.01 Demonstrate understanding of file formats and storage options.		
04.02 Identify the parts of the software interface.	LAFS.910.L.3.6 LAFS.1112.L.3.6	
04.03 Demonstrate the ability to use each of the basic tool sets.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
04.04 Demonstrate the ability to import, export and save images.		
04.05 Demonstrate understanding of layers and channels.		
04.06 Demonstrate understanding of filters, effects and plug-ins.		
04.07 Demonstrate understanding of file presets.		
04.08 Demonstrate the ability to select portions of an image for manipulation.		
04.09 Demonstrate the ability to transform selections and images (crop, scale).	MAFS.912.G-CO.1.1,2,3	
04.10 Demonstrate the ability to color-correct images (brightness, hue, contrast).		SC.912.P.10.18
04.11 Demonstrate the ability to use brushes for image creation and correction.		
04.12 Understand non-destructive and destructive operations.		
04.13 Demonstrate the ability to import, paint and export 3-D objects.		
04.14 Demonstrate the basic uses of video in photo editing software.		

Florida Department of Education
Student Performance Standards

Course Title: Digital Media/Multimedia Foundations 2
Course Number: 8201220
Course Credit: 1

Course Description:

This course covers competencies in advanced design, illustration software, color modes, and fonts.

Abbreviations:

FS-M/LA = Florida Standards for Math/Language Arts
 NGSSS-Sci = Next Generation Sunshine State Standards for Science

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
05.0 Demonstrate proficiency in advanced design – the student will be able to:		
05.01 Demonstrate knowledge of advanced design.		
05.02 Identify design strategies to reach the intended audience.		
05.03 Use storyboarding or sketches to plan a design.		
05.04 Create formal or informal design layouts using guidelines, colors, fonts, graphics and logos.		SC.912.P.10.18
05.05 Demonstrate use of authoring software integration.	MAFS.912.N-VM.1.1,2 MAFS.912.N-VM.2.4,5	SC.912.P.12.1
05.06 Identify compatibility formats (extensions) for authoring software integration.		
06.0 Demonstrate understanding of color modes – the student will be able to:		
06.01 Demonstrate knowledge of the color process for printing purposes.		SC.912.P.10.18
06.02 Demonstrate knowledge of color conversion from display to print.		SC.912.P.10.18
06.03 Demonstrate knowledge of spot colors.		SC.912.P.10.18
06.04 Demonstrate knowledge of web-safe colors.		SC.912.P.10.18
06.05 Explain color mode differences (e.g., RGB, CMYK, HSB).	LAFS.910.SL.2.4 LAFS.1112.SL.2.4	SC.912.P.10.18

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
06.06 Understand accessing color modes from authoring software.		SC.912.P.10.18
07.0 Demonstrate proficiency in using fonts for advanced design – the student will be able to:		
07.01 Identify <i>serif</i> and <i>sans-serif</i> fonts.	LAFS.910.L.3.6 LAFS.1112.L.3.6	
07.02 Demonstrate knowledge of conversion of fonts to outlines.		
07.03 Understand the proprietary copyrights of fonts.		
07.04 Demonstrate knowledge of standard font formats (e.g., TrueType, PostScript, OpenType).		
07.05 Design and develop a print and a digital portfolio that includes business cards, posters, billboards, magazines, and brochures.		
08.0 Demonstrate proficiency in using illustration software – the student will be able to:		
08.01 Evaluate industry standard illustration software packages.		
08.02 Identify characteristics of vector and bitmap images.		SC.912.P.12.1
08.03 Demonstrate understanding of the software workspace.		
08.04 Demonstrate software navigation (e.g., views, tabs, zoom).		
08.05 Demonstrate use of drawing tools to create, combine and edit basic shapes.	MAFS.912.G-CO.1.1,2,3,4,5	
08.06 Demonstrate the ability to transform content (e.g., scale, rotation, position).	MAFS.912.G-CO.1.1,2,3,4,5	
08.07 Demonstrate use of pen and pencil tools to draw/edit straight and curved paths.	MAFS.912.G-CO.1.5	
08.08 Demonstrate use of color and painting tools (e.g., patterns, gradients, color palettes).		SC.912.P.10.18
08.09 Demonstrate the ability to work with type (e.g., formatting, font palette, character panels, paths).		
08.10 Demonstrate use of layers by creating, locking, viewing, pasting, merging.		
08.11 Demonstrate use of blending (gradients, objects).		SC.912.P.10.18
08.12 Demonstrate use of brushes; download new brushes.		
08.13 Explore file exporting options and round trip workflows with page layout software.		
08.14 Demonstrate knowledge of bleed for vector and bitmap design software.		SC.912.P.12.1

CTE Standards and Benchmarks	FS-M/LA	NGSS-Sci
08.15 Demonstrate knowledge of bleed in regards to vector and image editing software.		SC.912.P.12.1

Florida Department of Education
Student Performance Standards

Course Title: Digital Media/Multimedia Foundations 3
Course Number: 8201230
Course Credit: 1

Course Description:

This course covers competencies in design layout software.

Abbreviations:

FS-M/LA = Florida Standards for Math/Language Arts
 NGSSS-Sci = Next Generation Sunshine State Standards for Science

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
09.0 Demonstrate knowledge of design layout software – the student will be able to:		
09.01 Demonstrate understanding of file formats and storage options.		
09.02 Identify parts of the software interface.	LAFS.910.L.3.6 LAFS.1112.L.3.6	
09.03 Demonstrate the ability to customize and navigate the workspace.		
09.04 Demonstrate understanding of pre-flighting.		
09.05 Work with styles, graphics and objects in a design.		
09.06 Set up a document and manage pages within document.		
09.07 Demonstrate use of layers, text frames and graphic frames.		
09.08 Demonstrate the ability to align, transform and group objects.		
09.09 Understand typography and text editing.		
09.10 Demonstrate understanding of color (e.g., applying, gradients, tint, spot, management).		SC.912.P.10.18
09.11 Import and modify graphics (e.g., links, vector/bitmap images, quality, alpha channels).		SC.912.P.12.1
09.12 Understand output and exporting functions (e.g., proofs, separations, prepress).		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
10.0 Demonstrate proficiency in using presentation software and equipment to produce a complex presentation – the student will be able to:		
10.01 Use authoring/editing software to create a multimedia presentation that incorporates graphics, video, animation, music, and narration and that adheres to good design principles.	LAFS.910.SL.2.5,6 LAFS.1112.SL.2.5, 6	
10.02 Demonstrate knowledge of the roles and responsibilities of a multimedia production team (e.g., project manager, creative or design director, content experts, writers, graphic designers, animators, sound designers, videographers, interface designers/programmers).		

Florida Department of Education
Student Performance Standards

Course Title: Digital Media/Multimedia Foundations 4
Course Number: 8201240
Course Credit: 1

Course Description:

This course covers competencies in webpage design, HTML and CSS, and authoring software for webpage design.

Abbreviations:

FS-M/LA = Florida Standards for Math/Language Arts
 NGSSS-Sci = Next Generation Sunshine State Standards for Science

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
11.0 Demonstrate proficiency in webpage design – the student will be able to:		
11.01 Determine the objectives and the audience for webpages.	LAFS.910.W.2.4 LAFS.1112.W.2.4	
11.02 Identify design strategies to reach and keep an audience.	LAFS.910.W.2.4 LAFS.1112.W.2.4	SC.912.N.1.1
11.03 Use storyboarding to plan a website.		
11.04 Create styles and other design elements (e.g., backgrounds, colors, fonts, buttons).		
12.0 Demonstrate understanding of HTML and CSS – the student will be able to:		
12.01 Interpret HTML coding on an existing webpage.		
12.02 Interpret HTML commands to write a webpage.		
12.03 Demonstrate understanding of Cascading Style Sheets (CSS) on an existing webpage.		
12.04 Demonstrate compliance with ADA recommendations for all websites created.	SEE NOTE	
12.05 Utilize markup validity to ensure compliance with the W3C for all websites created.		
13.0 Demonstrate proficiency in authoring software for webpage design – the student will be able to:		
13.01 Demonstrate understanding of photograph compression factors such as transmission speed, color reduction, and browser support.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
13.02 Save and export a photograph to the web in the best format for image quality and file size.		
13.03 Demonstrate knowledge of image formats related to photos and graphics on the Internet.	MAFS.912.G-SRT.1.2 MAFS.912.G-SRT.3.6	
13.04 Demonstrate understanding of pixels for web design.		
13.05 Create webpages for publication.		
13.06 Apply style sheets for consistent website design.		
13.07 Format text for webpages (e.g., font families, sizes).	MAFS.912.G-C.2.5 MAFS.912.G-SRT.1.1,2,3	
13.08 Create and edit images and photographs for webpages using digital imaging software.	MAFS.912.G-CO-1.2	
13.09 Create and insert buttons into a webpage and test for accuracy.		
13.10 Create navigational links.		
13.11 Insert audio files into a webpage.		
13.12 Create, edit and integrate video files into a webpage.		
13.13 Create, edit and integrate animation files into a webpage.		
13.14 Create meta-commands and keywords for search engines.		
13.15 Optimize page size for effective downloading to browsers.	MAFS.912.G-SRT.1.1,2	
13.16 Create and incorporate a form into a webpage.		
13.17 Edit and test links for accuracy and validity.		
13.18 Create several webpages for a portfolio.	LAFS.910.W.2.4 LAFS.1112.W.2.4 LAFS.910.W.2.6 LAFS.1112.W.2.6	

Florida Department of Education
Student Performance Standards

Course Title: Digital Media/Multimedia Foundations 5
Course Number: 8201250
Course Credit: 1

Course Description:

This course covers competencies in animated webpage design and the use of interactive design software.

Abbreviations:

FS-M/LA = Florida Standards for Math/Language Arts
 NGSSS-Sci = Next Generation Sunshine State Standards for Science

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
14.0 Demonstrate proficiency in animated webpage design – the student will be able to:		
14.01 Determine the objectives and the audience for interactive animated webpages.		
14.02 Identify design strategies to reach and keep an audience.		SC.912.N.1.1
14.03 Use storyboarding to plan an interactive animated website.		
14.04 Demonstrate understanding of the correct use of authoring design software to create animated webpage layouts		
14.05 Demonstrate understanding of pixels in relation to animated webpages, interactive presentations, banners, etc.		
14.06 Save and export photographs and graphics to the web in the best format for image quality and file size.		
15.0 Demonstrate understanding of object-oriented scripting and website animation – the student will be able to:		
15.01 Interpret object-oriented scripts and animation for an existing webpage.		
15.02 Understand the use of object-oriented scripting and animation for webpages.		
16.0 Demonstrate proficiency in the use of interactive design software for webpage design, interactive presentations and banners – the student will be able to:		
16.01 Demonstrate knowledge of image formats related to photos and graphics on the Internet.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
16.02 Optimize page size for effective downloading to the browser.		
16.03 Use scripting to create an interactive webpage, interactive presentation, and web banner for publication.		
16.04 Demonstrate knowledge of timelines, scenes, and other features.		
16.05 Insert audio files into an interactive webpage, interactive presentation and web banner.		
16.06 Integrate video files into an interactive webpage, interactive presentation, and web banner.		

Florida Department of Education
Student Performance Standards

Course Title: Digital Media/Multimedia Foundations 6
Course Number: 8201260
Course Credit: 1

Course Description:

This course covers competencies in the use of video editing software and equipment.

Abbreviations:

FS-M/LA = Florida Standards for Math/Language Arts
 NGSSS-Sci = Next Generation Sunshine State Standards for Science

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
17.0 Demonstrate proficiency using video editing software and equipment – the student will be able to:		
17.01 Demonstrate knowledge of non-linear editing software.		
17.02 Identify components of non-linear video editing equipment.		
17.03 Set up non-linear video editing equipment.		
17.04 Compare offline editing to linear video editing.		
17.05 Use storyboarding to plan a short non-linear video project that includes existing video footage with a title, transitions, background sound, voice-over, animation, and rolling credits.		SC.912.10.21
17.06 Use video editing software to create and edit a movie that includes video footage with a title, transitions, background sound, voice-over, and rolling credits and output to video.		SC.912.P.10.21
17.07 Collaborate with team members to plan, edit, and shoot video footage utilizing advanced video editing techniques and output to video.	LAFS.910.SL.1.1 LAFS.1112.SL.1.1	
17.08 Discuss the use of batch processing and project trimming.	LAFS.910.SL.1.1 LAFS.1112.SL.1.1	
17.09 Plan, create, edit and present a short non-linear movie with title, transitions, sub and virtual clips, sound, background music, voice-over, and credits.		SC.912.P.10.21

**Florida Department of Education
Student Performance Standards**

Course Title: Digital Media/Multimedia Foundations 7
Course Number: 8201270
Course Credit: 1

Course Description:

In this course students will utilize authoring software, create an advertising campaign, and participate in work-based learning experiences and career planning.

Abbreviations:

FS-M/LA = Florida Standards for Math/Language Arts
 NGSSS-Sci = Next Generation Sunshine State Standards for Science

CTE Standards and Benchmarks		FS-M/LA	NGSSS-Sci
18.0	Develop proficiency in using authoring software – the student will be able to:		
18.01	Plan interactive projects for use at a kiosk, CD, DVD, e-merchandising, computer-based presentation, training or corporate presentation.		SC.912.N.1.1
18.02	Use authoring software to create an interactive project for use in a kiosk, CD, DVD, merchandising applications, computer-based training or corporate presentation.		SC.912.N.1.1
18.03	Have the created interactive project evaluated and tested by users and make modifications to improve the project.		SC.912.N.1.1
18.04	Collaborate with team members to plan, edit, evaluate, and present a multimedia interactive presentation or product.	LAFS.910.SL.1.1 LAFS.1112.SL.1.1	SC.912.N.1.1
19.0	Demonstrate proficiency using all media to create an advertising campaign – the student will be able to:		
19.01	Use authoring software to plan and create an advertising campaign that includes collateral materials, digital photography, webpages, animation, video, and audio.		
20.0	Participate in work-based learning experiences – the student will be able to:		
20.01	Participate in work-based learning experiences in a digital media/multimedia environment.		
21.0	Apply job readiness, career planning and job seeking skills to meet personal and professional goals – the student will be able to:		
21.01	Create a digital résumé and print it.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
21.02 Create and publish a digital portfolio.		
21.03 Market digital media/multimedia design skills for employment.		

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 occupational standards and benchmarks outlined in this secondary program correlate to the standards and benchmarks of the postsecondary program with the same Classification of Instructional Programs (CIP) number.

MyCareerShines is an interactive resource to assist students in identifying their ideal career and to enhance preparation for employment. Teachers are encouraged to integrate this resource into the program curriculum to meet the employability goals for each student.

Career and Technical Student Organization (CTSO)

SkillsUSA is the intercurricular career and technical student organization(s) 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.

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 Occupational Completion Point (OCP) or a Modified Occupational Completion Point (MOCP). 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 an OCP/MOCP. The student should work on different competencies and new applications of competencies each year toward completion of the OCP/MOCP. 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: Digital Photography Technology
Program Type: Career Preparatory
Career Cluster: Arts, A/V Technology and Communication

Secondary – Career Preparatory

Program Number	8201300
CIP Number	0650060502
Grade Level	9-12
Standard Length	7 credits
Teacher Certification	Refer to the <u>Program Structure</u> section.
CTSO	SkillsUSA
SOC Codes (all applicable)	27-4021 – Photographers 27-4032 – Film and Video editors

Purpose

The purpose of this program is to prepare students for careers in the photography industry.

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 Arts, A/V Technology and Communication 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 Arts, A/V Technology and Communication career cluster.

The content includes, but is not limited to, communication skills, leadership skills, human relations and employability skills, safe and efficient work practices, and the use of digital cameras techniques, commercial and industrial applications with emphasis on composition and color dynamics, printing, workflow, software and use, care, and maintenance of photographic 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 seven courses divided into four 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 secondary program structure:

OCP	Course Number	Course Title	Teacher Certification	Length	SOC Code	Level	Graduation Requirement
A	8201310	Digital Photography 1	PHOTOG @7 7G	1 credit	27-4021	2	PA
B	8201320	Digital Photography 2		1 credit	27-4021	2	
	8201330	Digital Photography 3		1 credit	27-4021	2	PA
C	8201340	Digital Photography 4		1 credit	27-4032	2	PA
	8201350	Digital Photography 5		1 credit	27-4032	2	
D	8201360	Digital Photography 6		1 credit	27-4021	2	PA
	8201370	Digital Photography 7		1 credit	27-4021	2	PA

(Graduation Requirement Abbreviations- EQ= Equally Rigorous Science, PA= Practical Arts, EC= Economics)

Florida Standards for Technical Subjects

Florida Standards (FS) for English Language Arts and Literacy in History/Social Studies, Science, and Technical Subjects are the critical reading and writing literacy standards designed for grade 6 and above. These standards are predicated on teachers of history/social studies, science, and technical subjects using their content area expertise to help students meet the particular challenges of reading, writing, speaking, listening, and language in their respective fields. The FS for Mathematical Practices are designed for grades K-12 and describe varieties of expertise that educators at all levels should seek to develop in their students. These practices rest on important “processes and proficiencies” with longstanding importance in mathematics education.

Instructors must incorporate the Florida Standards for Technical Subjects and Mathematical Practices throughout instruction of this CTE program.

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.

Common Career Technical Core – Career Ready Practices

Career Ready Practices describe the career-ready skills that educators should seek to develop in their students. These practices are not exclusive to a Career Pathway, program of study, discipline or level of education. Career Ready Practices should be taught and reinforced in all career exploration and preparation programs with increasingly higher levels of complexity and expectation as a student advances through a program of study.

1. Act as a responsible and contributing citizen and employee.
2. Apply appropriate academic and technical skills.
3. Attend to personal health and financial well-being.
4. Communicate clearly, effectively and with reason.
5. Consider the environmental, social and economic impacts of decisions.
6. Demonstrate creativity and innovation.
7. Employ valid and reliable research strategies.
8. Utilize critical thinking to make sense of problems and persevere in solving them.
9. Model integrity, ethical leadership and effective management.
10. Plan education and career path aligned to personal goals.
11. Use technology to enhance productivity.
12. Work productively in teams while using cultural/global competence.

Standards

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

- 01.0 Demonstrate understanding of the history of photography.
- 02.0 Evaluate the production process.
- 03.0 Demonstrate understanding of intellectual property rights, copyright laws and plagiarism as each applies to creative assets.
- 04.0 Operate parts of a camera system.
- 05.0 Demonstrate use of camera support equipment.
- 06.0 Take basic photographs.
- 07.0 Use photographic workflow applications.
- 08.0 Develop a production plan.
- 09.0 Demonstrate knowledge of art/creative direction.
- 10.0 Demonstrate proficiency in computer skills.
- 11.0 Use photo editing software.
- 12.0 Use photographic lights.
- 13.0 Use photography sets, backgrounds and stages.
- 14.0 Process and print photographs.
- 15.0 Demonstrate knowledge of photo/video journalism.
- 16.0 Demonstrate knowledge of digital single-lens reflex (DSLR) video production.
- 17.0 Demonstrate knowledge of video software.
- 18.0 Practice the business of commercial digital photography.
- 19.0 Operate various format cameras.
- 20.0 Demonstrate knowledge of High Dynamic Range (HDR) photography.
- 21.0 Develop a professional portfolio of work.

Florida Department of Education
Student Performance Standards

Course Title: Digital Photography 1
Course Number: 8201310
Course Credit: 1

Course Description:

This course provides competencies in photographic history, the production process, intellectual property rights, camera systems, support equipment, basic photography and workflow applications.

Abbreviations:

FS-M/LA = Florida Standards for Math/Language Arts
NGSSS-Sci = Next Generation Sunshine State Standards for Science

Note: This course is pending alignment in the following categories: FS-M/LA and NGSSS-Sci.

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
01.0 Demonstrate understanding of the history of photography – the student will be able to:		
01.01 Demonstrate knowledge of photography as an invention.		
01.02 Demonstrate knowledge of early uses of photography.		
01.03 Describe the mechanics of early photographic systems.		
01.04 Identify photography as an art form.		
01.05 Illustrate the concept of the “decisive moment.”		
01.06 Demonstrate knowledge of pictorial photography.		
01.07 Demonstrate knowledge of straight photography.		
01.08 Demonstrate knowledge of documentary photography.		
01.09 Define aspects of photojournalism.		
02.0 Evaluate the production process – the student will be able to:		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
02.01 Identify the job titles associated with digital photography.		
02.02 Identify various tools and equipment used in digital photography.		
02.03 Use speed and efficiency concepts (workflow).		
02.04 Identify the different types of photographic media (e.g., photojournalism, fine art, event, family portrait, fashion, sports, magazine and product).		
02.05 Identify the interrelationships among artists.		
02.06 Use basic communication concepts (e.g., verbal, memos, paperwork, purchase orders).		
02.07 Identify the stages of production.		
02.08 Examine photographic terms and jargon.		
02.09 Create and organize contact sheets or prepare for presentations online and in person.		
03.0 Demonstrate understanding of intellectual property rights, copyright laws and plagiarism as each applies to creative assets – the student will be able to:		
03.01 Examine the limits and expectations of copyright protection.		
03.02 Analyze the concepts of “fair use” and “fair dealing.”		
03.03 Demonstrate understanding of the transfer and licensing of creative works.		
03.04 Articulate the use of “exclusive rights” to intellectual creations.		
03.05 Demonstrate the use of digital watermarking and embedding file information.		
04.0 Operate parts of a camera system – the student will be able to:		
04.01 Identify basic camera anatomy (e.g., lens, battery, flash, shutter, display).		
04.02 Remove and attach standard lenses.		
04.03 Charge and connect batteries.		
04.04 Identify, insert and format recording media.		
04.05 Use basic camera functions (e.g., power, date/time and menu navigation).		
04.06 Set image format and size.		
04.07 Use camera auto, program, and scene modes.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
04.08 Use camera viewfinder and LCD displays for image review.		
04.09 Use basic lens controls (auto, manual focus, and zoom).		
04.10 Use image International Standards Organization (ISO) and metering functions.		
04.11 Use white balance operations.		
04.12 Use shutter and aperture priority modes.		
04.13 Set proper f-stop and shutter speeds.		
04.14 Use camera drive modes such as delayed, multiple and remote.		
04.15 Operate a camera mounted flash and use fill and red-eye reduction.		
05.0 Demonstrate use of camera support equipment – the student will be able to:		
05.01 Perform basic camera handholds in portrait and landscape.		
05.02 Identify basic components of a tripod (head, sticks, spreader).		
05.03 Assemble fluid head and friction head tripod components.		
05.04 Setup and level tripod for use in portrait and landscape.		
05.05 Attach camera to support equipment.		
05.06 Identify auxiliary support devices.		
06.0 Take basic photographs – the student will be able to:		
06.01 Apply camera care and maintenance principles.		
06.02 Define the subject of a photograph.		
06.03 Identify available light sources.		
06.04 Demonstrate understanding of photo composition (rule of thirds).		
06.05 Select an appropriate lens for subject (wide, tight, macro).		
06.06 Take still life photographs using available light.		
06.07 Take portrait photographs using available light.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
06.08 Take action photographs using available light.		
06.09 Create a series (picture study) of photographs around a defined subject.		
07.0 Use photographic workflow applications – the student will be able to:		
07.01 Establish system requirements for workflow application software.		
07.02 Install and configure workflow application software.		
07.03 Identify parts of the software interface (menus and palettes).		
07.04 Import photographs from various media sources (CF, SD and DVD formats).		
07.05 Define and create keyword tags for imported images.		
07.06 Organize, rate, label and rename image collections.		
07.07 Create and modify image metadata.		
07.08 Perform image post-processing (white balance, color, tone and crop).		
07.09 Export images to disk or photo editing software.		
07.10 Create and upload a web gallery to online photo sharing sites.		

Florida Department of Education
Student Performance Standards

Course Title: Digital Photography 2
Course Number: 8201320
Course Credit: 1

Course Description:

This course covers competencies in developing a production plan, creative direction and computer skills.

Abbreviations:

FS-M/LA = Florida Standards for Math/Language Arts
NGSSS-Sci = Next Generation Sunshine State Standards for Science

Note: This course is pending alignment in the following categories: FS-M/LA and NGSSS-Sci.

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
08.0 Develop a production plan – the student will be able to:		
08.01 Work with the client to define the scope of work.		
08.02 Work with the client to identify the message.		
08.03 Determine distribution requirements and client deliverables.		
08.04 Identify the stages of production.		
08.05 Create basic communication concepts verbally and through memos and paperwork.		
08.06 Develop a production schedule.		
08.07 Define roles and coordinate needed production crew.		
08.08 Evaluate the scope and use of model releases.		
08.09 Evaluate the scope and use of property releases.		
08.10 Evaluate the scope and use of liability releases.		
08.11 Identify need and use for production insurance.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
08.12 Determine and secure equipment.		
08.13 Examine industry terms and jargon.		
09.0 Demonstrate knowledge of art/creative direction – the student will be able to:		
09.01 Develop the overall visual appearance of a photograph/video.		
09.02 Demonstrate the ability to create moods with style.		
09.03 Describe the importance of art direction as it pertains to the message to be conveyed.		
09.04 Identify the use of color in art direction.		
09.05 Document the technical aspects of art direction for use in production.		
09.06 Perform various assignments in a professional manner according to industry standards.		
10.0 Demonstrate proficiency in computer skills – the student will be able to:		
10.01 Identify all computer parts.		
10.02 Demonstrate understanding of computer performance specifications.		
10.03 Compare and contrast differences between business machines and workstations.		
10.04 Demonstrate best practices of computer safety and ergonomics.		
10.05 Demonstrate understanding of operating systems.		
10.06 Perform software installation and setup.		
10.07 Perform peripheral device installation and setup.		
10.08 Perform computer upgrades (memory, hard disks, cards).		
10.09 Perform storage management operations (project/file).		
10.10 Demonstrate knowledge of computer maintenance.		
10.11 Troubleshoot computer hardware and software issues.		

Florida Department of Education
Student Performance Standards

Course Title: Digital Photography 3
Course Number: 8201330
Course Credit: 1

Course Description:

This course covers competencies in photo editing software, photographic lights, sets and photo processing.

Abbreviations:

FS-M/LA = Florida Standards for Math/Language Arts
NGSSS-Sci = Next Generation Sunshine State Standards for Science

Note: This course is pending alignment in the following categories: FS-M/LA and NGSSS-Sci.

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
11.0 Use photo editing software – the student will be able to:		
11.01 Identify computer requirements for photographic software.		
11.02 Demonstrate understanding of file formats and storage options.		
11.03 Compare and contrast available photographic software.		
11.04 Identify parts of the software interface (menus and palettes).		
11.05 Use each of the basic tool sets.		
11.06 Import, export and save images.		
11.07 Develop a software and file backup plans.		
11.08 Demonstrate understanding of layers and channels.		
11.09 Demonstrate understanding of filters, effects and plug-ins.		
11.10 Demonstrate understanding of file presets.		
11.11 Select portions of an image for manipulation.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
11.12 Transform selections and images (crop, scale).		
11.13 Color-correct images (brightness, hue and contrast).		
11.14 Use brushes for image creation and correction.		
11.15 Identify non-destructive and destructive operations.		
11.16 Import, edit and export raw files.		
11.17 Demonstrate the basic uses of video.		
11.18 Implement the undo/redo history and cache system.		
11.19 Use keyboard shortcuts to improve efficiency.		
11.20 Locate and effectively use the help menu system.		
12.0 Use photographic lights – the student will be able to:		
12.01 Demonstrate understanding of light (direction, intensity, color, contrast, hardness).		
12.02 Demonstrate understanding of natural, artificial, available and ambient light sources.		
12.03 Demonstrate understanding and use of sunlight (time of day, color temperature, color correcting, blocking and shade).		
12.04 Use continuous lighting setups and equipment.		
12.05 Use flash and strobe light setups and systems.		
12.06 Use onboard flash systems.		
12.07 Demonstrate understanding of three-point lighting.		
12.08 Use a light meter.		
12.09 Use light modifiers such as scrim, reflectors and flags.		
12.10 Use lights on location.		
13.0 Use photography sets, backgrounds and stages – the student will be able to:		
13.01 Coordinate with creative director on set plan.		
13.02 Define the intended look and materials to be used.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
13.03 Erect background stands and hang background material.		
13.04 Build hard and soft cyclorama product stages.		
13.05 Adjust available seating for studio portraits.		
13.06 Safely secure all grip equipment including reflector stands, c-stand, light stands and sand bags.		
14.0 Process and print photographs – the student will be able to:		
14.01 Prepare photos for print using photo editing software.		
14.02 Adjust the crop, bleed and trim of a photo.		
14.03 Adjust the color mode and resolution of a photo.		
14.04 Calibrate computer monitor and software for printing system.		
14.05 Compare and contrast available papers, printers and inks.		
14.06 Compare and contrast available printing services based on quality, speed, price, reliability, and location.		
14.07 Demonstrate understanding of International Color Consortium (ICC) profiles.		
14.08 Demonstrate understanding of archival inks and papers.		
14.09 Work with color images and black and white images.		
14.10 Analyze color prints for correct color and contrast.		
14.11 Mount, mat and frame photographs.		

Florida Department of Education
Student Performance Standards

Course Title: Digital Photography 4
Course Number: 8201340
Course Credit: 1

Course Description:

This course covers competencies in photo/video journalism and digital single-lens reflex (DSLR) video production.

Abbreviations:

FS-M/LA = Florida Standards for Math/Language Arts
NGSSS-Sci = Next Generation Sunshine State Standards for Science

Note: This course is pending alignment in the following categories: FS-M/LA and NGSSS-Sci.

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
15.0 Demonstrate knowledge of photo/video journalism – the student will be able to:		
15.01 Demonstrate understanding of the history of photo/video journalism.		
15.02 Identify the jobs and roles related to photo/video journalism.		
15.03 Analyze the legal and ethical issues related to photo/video journalism.		
15.04 Describe the elements that make up a photo story.		
15.05 Sequence a photo story and write captions.		
15.06 Imbed metadata as needed.		
15.07 Shoot correct length of video to tell story and provide coverage.		
15.08 Prepare media and identify distribution sources.		
16.0 Demonstrate knowledge of digital single-lens reflex (DSLR) video production – the student will be able to:		
16.01 Compare photography and video on DSLR.		
16.02 Compose shots for movement.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
16.03 Choose the appropriate video format (standard/codec and frame rate).		
16.04 Compare and contrast DSLR video with traditional video cameras.		
16.05 Choose appropriate recording media based on card speed and size.		
16.06 Select appropriate video-friendly lenses and focusing aids.		
16.07 Select appropriate lighting gear.		
16.08 Set appropriate exposure, white balance and shutter speed.		
16.09 Connect and setup audio interface.		
16.10 Identify video compression picture quality loss.		
16.11 Demonstrate the use of full and cropped sensors (e.g., rolling shutter).		
16.12 Establish the use of action-safe and title-safe areas.		
16.13 Set appropriate focus.		
16.14 Use microphones and audio devices.		
16.15 Understand the use of matte boxes.		

Florida Department of Education
Student Performance Standards

Course Title: Digital Photography 5
Course Number: 8201350
Course Credit: 1

Course Description:

This course covers competencies in video software and commercial digital photography business.

Abbreviations:

FS-M/LA = Florida Standards for Math/Language Arts

NGSSS-Sci = Next Generation Sunshine State Standards for Science

Note: This course is pending alignment in the following categories: FS-M/LA and NGSSS-Sci.

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
17.0 Demonstrate knowledge of video software – the student will be able to:		
17.01 Demonstrate understanding of file formats and storage options.		
17.02 Identify parts of the software interface.		
17.03 Use each of the basic tool sets.		
17.04 Import files and videos to be composited.		
17.05 Use layers and compositing.		
17.06 Use filters, effects and plug-ins.		
17.07 Use motion paths.		
17.08 Use lighting effects.		
17.09 Use rendering functions.		
17.10 Mask video.		
17.11 Color-correct video using brightness, hue and contrast adjustments.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
17.12 Use vector and color keying tools.		
17.13 Demonstrate understanding of time correction.		
17.14 Export final video to be used with video editing software.		
18.0 Practice the business of commercial digital photography – the student will be able to:		
18.01 Identify business aspects of commercial digital photography.		
18.02 Apply appropriate communication and human relations skills.		
18.03 Understand the photography industry’s various market sectors (e.g., events, family portrait, public relations, product/studio, fashion, catalog, magazine, food).		
18.04 Develop a business plan for a commercial photography business.		
18.05 Identify and understand the importance of industry associations related to commercial photography.		
18.06 Describe the role of special interest groups.		
18.07 Research market rates for photographic work.		
18.08 Compare and contrast available stock photography sites.		

Florida Department of Education
Student Performance Standards

Course Title: Digital Photography 6
Course Number: 8201360
Course Credit: 1

Course Description:

This course covers competencies in format cameras and High Dynamic Range (HDR) photography.

Abbreviations:

FS-M/LA = Florida Standards for Math/Language Arts
NGSSS-Sci = Next Generation Sunshine State Standards for Science

Note: This course is pending alignment in the following categories: FS-M/LA and NGSSS-Sci.

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
19.0 Operate various format cameras – the student will be able to:		
19.01 Use alternative format cameras.		
19.02 Use a medium format camera.		
19.03 Use a point and shoot camera (fixed lens).		
19.04 Use a mobile phone camera.		
19.05 Use a digital single-lens reflex (DSLR) camera.		
19.06 Use a mirrorless camera.		
20.0 Demonstrate knowledge of High Dynamic Range (HDR) photography – the student will be able to:		
20.01 Explain HDR photography.		
20.02 Demonstrate HDR workflow and operation.		
20.03 Select appropriate HDR subject.		
20.04 Select appropriate camera support equipment (tripod, monopod, grips).		

CTE Standards and Benchmarks	FS-M/LA	NGSS-Sci
20.05 Configure camera for HDR photography.		
20.06 Acquire an HDR image.		
20.07 Process and create HDR images with photo editing software.		
20.08 Reduce ghosting effect using photo editing software.		
20.09 Reduce noise and correct chromatic aberrations.		
20.10 Export finished image as flat image or HDR format image.		

Florida Department of Education
Student Performance Standards

Course Title: Digital Photography 7
Course Number: 8201370
Course Credit: 1

Course Description:

This course consists of developing a professional photography portfolio.

Abbreviations:

FS-M/LA = Florida Standards for Math/Language Arts
 NGSSS-Sci = Next Generation Sunshine State Standards for Science

Note: This course is pending alignment in the following categories: FS-M/LA and NGSSS-Sci.

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
21.0 Develop a professional portfolio of work – the student will be able to:		
21.01 Identify elements of a professional portfolio and résumé.		
21.02 Examine and determine student work to include in a portfolio and résumé.		
21.03 Gather cohesive photographs and information to include in a portfolio and résumé.		
21.04 Explore the use of Internet websites for portfolio distribution.		
21.05 Determine the format for a portfolio and a résumé.		
21.06 Research local galleries for portfolio exhibition.		
21.07 Produce résumé for final review.		

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 occupational standards and benchmarks outlined in this secondary program correlate to the standards and benchmarks of the postsecondary program with the same Classification of Instructional Programs (CIP) number.

MyCareerShines is an interactive resource to assist students in identifying their ideal career and to enhance preparation for employment. Teachers are encouraged to integrate this resource into the program curriculum to meet the employability goals for each student.

Career and Technical Student Organization (CTSO)

SkillsUSA is the intercurricular career and technical student organization(s) 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.

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 Occupational Completion Point (OCP) or a Modified Occupational Completion Point (MOCP). 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 an OCP/MOCP. The student should work on different competencies and new applications of competencies each year toward completion of the OCP/MOCP. 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: Digital Video Technology
Program Type: Career Preparatory
Career Cluster: Arts, A/V Technology and Communication

Secondary – Career Preparatory

Program Number	8201400
CIP Number	0610010523
Grade Level	9-12
Standard Length	6 credits
Teacher Certification	Refer to the Program Structure section.
CTSO	SkillsUSA
SOC Codes (all applicable)	27-4011 – Audio and Video Equipment Technicians 27-4031 – Camera Operators, Television, Video and Motion Picture 27-4032 – Film and Video Editors

Purpose

The purpose of this program is to prepare students for initial employment as production assistants, audio/video equipment technician, video/TV camera operators, video editors, multimedia artists/animators and broadcast technicians.

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 Arts, A/V Technology and Communication 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 Arts, A/V Technology and Communication career cluster.

The content includes, but is not be limited to, communication skills, leadership skills, human relations and employability skills, safe and efficient work practices, and preparation to assume responsibility for the overall production of digital video activities (e.g., scripts, lighting, camera operation, electronic news gathering, field/studio production, video editing).

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 three 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 secondary program structure:

OCP	Course Number	Course Title	Teacher Certification	Length	SOC Code	Level	Graduation Requirement
A	8201410	Digital Video Technology 1	TEC ED 1 @ 2 ENG&TEC ED1@2 TV PRO TEC @7 7G	1 credit	27-4011	3	PA
	8201420	Digital Video Technology 2		1 credit		3	PA
	8201430	Digital Video Technology 3		1 credit		3	PA
B	8201440	Digital Video Technology 4		1 credit	27-4031	3	PA
	8201450	Digital Video Technology 5		1 credit		3	PA
C	8210460	Digital Video Technology 6		1 credit	27-4032	3	PA

(Graduation Requirement Abbreviations- EQ= Equally Rigorous Science, PA= Practical Arts, EC= Economics)

Academic Alignment Table

Academic alignment is an ongoing, collaborative effort of professional educators specializing in the fields of science, mathematics, English/language arts, and Career and Technical Education (CTE). This initiative supports CTE programs by improving student performance through the integration of academic content within CTE courses. Career and Technical Education courses that have been aligned to the Next Generation Sunshine State Standards for Science and the Florida Standards for Mathematics and English/Language Arts will show the following data: the quantity of academic standards in the CTE course; the total number of standards contained in the academic course; and the percentage of alignment to the CTE course.

Courses	Anatomy/ Physiology Honors	Astronomy Solar/Galactic Honors	Biology 1	Chemistry 1	Earth- Space Science	Environmental Science	Genetics	Integrated Science	Marine Science 1 Honors	Physical Science	Physics 1
8201410	**	**	**	**	**	**	**	**	**	**	**
8201420	**	**	**	**	**	**	**	**	**	**	**
8201430	**	**	**	**	**	**	**	**	**	**	**
8201440	**	**	**	**	**	**	**	**	**	**	**
8201450	**	**	**	**	**	**	**	**	**	**	**
8201460	**	**	**	**	**	**	**	**	**	**	**

** Alignment pending review

Alignment attempted, but no correlation to academic course

Courses	Algebra 1	Algebra 2	Geometry	English 1	English 2	English 3	English 4
8201410	**	**	**	**	**	**	**
8201420	**	**	**	**	**	**	**
8201430	**	**	**	**	**	**	**
8201440	**	**	**	**	**	**	**
8201450	**	**	**	**	**	**	**
8201460	**	**	**	**	**	**	**

** Alignment pending review

Alignment attempted, but no correlation to academic course

Florida Standards for Technical Subjects

Florida Standards (FS) for English Language Arts and Literacy in History/Social Studies, Science, and Technical Subjects are the critical reading and writing literacy standards designed for grade 6 and above. These standards are predicated on teachers of history/social studies, science, and technical subjects using their content area expertise to help students meet the particular challenges of reading, writing, speaking, listening, and language in their respective fields. The FS for Mathematical Practices are designed for grades K-12 and describe varieties of expertise that educators at all levels should seek to develop in their students. These practices rest on important “processes and proficiencies” with longstanding importance in mathematics education.

Instructors must incorporate the Florida Standards for Technical Subjects and Mathematical Practices throughout instruction of this CTE program.

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.

Common Career Technical Core – Career Ready Practices

Career Ready Practices describe the career-ready skills that educators should seek to develop in their students. These practices are not exclusive to a Career Pathway, program of study, discipline or level of education. Career Ready Practices should be taught and reinforced in all career exploration and preparation programs with increasingly higher levels of complexity and expectation as a student advances through a program of study.

1. Act as a responsible and contributing citizen and employee.
2. Apply appropriate academic and technical skills.
3. Attend to personal health and financial well-being.
4. Communicate clearly, effectively and with reason.
5. Consider the environmental, social and economic impacts of decisions.
6. Demonstrate creativity and innovation.
7. Employ valid and reliable research strategies.
8. Utilize critical thinking to make sense of problems and persevere in solving them.
9. Model integrity, ethical leadership and effective management.
10. Plan education and career path aligned to personal goals.
11. Use technology to enhance productivity.
12. Work productively in teams while using cultural/global competence.

Standards

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

- 01.0 Demonstrate safe and efficient work practices.
- 02.0 Demonstrate the ability to execute the steps in the digital video pre-production process.
- 03.0 Demonstrate the ability to successfully complete the digital video production process.
- 04.0 Create appropriate lighting for location and/or set productions.
- 05.0 Record, mix, and edit audio resources.
- 06.0 Demonstrate the ability to complete the digital video post-production process.
- 07.0 Design and generate graphic elements.
- 08.0 Demonstrate professionalism and personal responsibility.
- 09.0 Develop interviewing skills.
- 10.0 Demonstrate the ability to perform on camera.
- 11.0 Demonstrate the ability to complete the pre-production process for an advanced video production project.
- 12.0 Demonstrate the ability to complete the production process for an advanced video production project.
- 13.0 Demonstrate the ability to complete the post-production process for an advanced video production project.
- 14.0 Plan, coordinate, and manage a video or webcast production.
- 15.0 Demonstrate awareness of industry-related ethics and laws.
- 16.0 Demonstrate knowledge of the marketing and distribution phase of digital video production.
- 17.0 Demonstrate an understanding of employability in the digital video production industry.

**Florida Department of Education
Student Performance Standards**

Course Title: Digital Video Technology 1
Course Number: 8201410
Course Credit: 1

Course Description:

This course provides students with an introduction to the digital video production process; content includes safe work practices, planning a production set, designing lighting plans, camera operation, and audio/ video recording, mixing, and editing.

Abbreviations:

FS-M/LA = Florida Standards for Math/Language Arts
 NGSSS-Sci = Next Generation Sunshine State Standards for Science

Note: This course is pending alignment in the following categories: FS-M/LA and NGSSS-Sci.

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
01.0 Demonstrate safe and efficient work practices – the student will be able to:		
01.01 Follow industry safety rules, regulations, and policies.		
01.02 Demonstrate awareness of appropriate ergonomics.		
01.03 Demonstrate proper care of equipment.		
01.04 Demonstrate the appropriate and efficient use of equipment.		
02.0 Demonstrate the ability to execute the steps in the digital video pre-production process – the student will be able to:		
02.01 Identify the format/segment type, audience, and genre.		
02.02 Produce a video treatment.		
02.03 Create a script and storyboard appropriate to the needs of the production.		
02.04 Define the set requirements for a specific program type.		
02.05 Determine the props, costumes, and other resources required for a production.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
02.06 Select the appropriate location(s) for the specified program type.		
02.07 Establish feasible production timeframe targets.		
03.0 Demonstrate the ability to successfully complete the digital video production process – the student will be able to:		
03.01 Utilize current industry-standard video production equipment.		
03.02 Operate a video camera in studio and location (field) production environments.		
03.03 Identify commonly used camera angles.		
03.04 Plan a shot to obtain the required action/footage.		
03.05 Control camera movement to obtain the required effect(s).		
03.06 Control the lens, focal length, aperture, and exposure to obtain the required effect(s).		
03.07 Set up the camera and recording equipment sequence.		
04.0 Create appropriate lighting for location and/or set productions – the student will be able to:		
04.01 Determine the appropriate lighting needs for production settings.		
04.02 Identify location and studio lighting types and the methods of use and applications of each type.		
04.03 Use lighting equipment according to industry safety standards.		
04.04 Define light quality in terms of intensity, color, direction, and characters.		
05.0 Record, mix, and edit audio resources – the student will be able to:		
05.01 Identify and select microphones for production needs.		
05.02 Determine optimal microphone placement.		
05.03 Establish appropriate recording conditions.		
05.04 Set up audio recording equipment.		
05.05 Perform pre-production sound checks.		
05.06 Record production sound; organize and edit video resources.		

CTE Standards and Benchmarks	FS-M/LA	NGSS-Sci
05.07 Perform basic routine, preventative, and repair maintenance on audio equipment.		
06.0 Demonstrate the ability to successfully complete the digital video post-production process – the student will be able to:		
06.01 Log (input) and organize video and audio sources into post-production equipment and workflow.		
06.02 Operate editing hardware and software.		
06.03 Perform assemble edits and insert edits for the appropriate effects.		
06.04 Maintain continuity and production values.		
06.05 Mix audio and video resources in appropriate sequence for the final cut.		
06.06 Perform sound and video edits and enhancements.		
06.07 Apply color correction to video footage.		
06.08 Define appropriate audio and video digital compression and signal types.		
07.0 Design and generate graphic elements – the student will be able to:		
07.01 Determine the graphic requirements for a production.		
07.02 Operate graphic production software.		
07.03 Produce broadcast graphic elements for titling, credits, and graphic transitions.		
07.04 Determine the special effects needed for a specified production.		
07.05 Demonstrate an understanding of graphic image types, file formats, and technical requirements for a production.		
07.06 Edit graphics into a program or segment.		
07.07 Demonstrate an ability to use type, color, composition, and graphic elements for a specific production effect.		

**Florida Department of Education
Student Performance Standards**

Course Title: Digital Video Technology 2
Course Number: 8201420
Course Credit: 1

Course Description:

This course provides students with intermediate level instruction in the digital video production process.

Abbreviations:

FS-M/LA = Florida Standards for Math/Language Arts
 NGSSS-Sci = Next Generation Sunshine State Standards for Science

Note: This course is pending alignment in the following categories: FS-M/LA and NGSSS-Sci.

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
01.0 Demonstrate safe and efficient work practices – the student will be able to:		
01.05 Identify and locate safety equipment in media labs and on location (e.g., first aid kit, fire extinguisher).		
01.06 Determine the appropriate safety precautions and practices required for a specified production.		
02.0 Demonstrate the ability to execute the steps in the digital video pre-production process – the student will be able to:		
02.08 List the components of the pre-production phase (e.g., purpose, script writing, target audience, budget, schedule, script writing, output medium).		
02.09 Participate in a pre-production meeting to create a production plan.		
03.0 Demonstrate the ability to successfully complete the digital video production process – the student will be able to:		
03.08 Identify the components of the production phase (e.g., selecting equipment, operating equipment, interviewing, directing, lighting, audio).		
03.09 Summarize the roles of the various personnel for video production projects (e.g., producer, director, editor, camera operator).		
04.0 Create appropriate lighting for location and/or set productions – the student will be able to:		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
04.05 Explain the use of basic lighting equipment.		
04.06 Demonstrate one-, two-, and three-point lighting techniques.		
05.0 Record, mix, and edit audio resources – the student will be able to:		
05.08 Identify the types, uses, and pick-up patterns of various microphones.		
05.09 Compare and contrast various microphone types.		
06.0 Demonstrate the ability to complete the digital video post-production process – the student will be able to:		
06.09 List the components of the post-production phase (e.g., video and audio editing, graphics, output medium).		
06.10 List the steps required to successfully conduct a post-production meeting.		
07.0 Design and generate graphic elements – the student will be able to:		
07.08 Discuss <i>text, font, colors, title safe area, lower thirds, and placement</i> .		
07.09 Determine the most effective use of graphic elements for a specific production.		

**Florida Department of Education
Student Performance Standards**

Course Title: Digital Video Technology 3
Course Number: 8201430
Course Credit: 1

Course Description:

Students will participate in the digital video pre-production, production, and post-production processes.

Abbreviations:

FS-M/LA = Florida Standards for Math/Language Arts
 NGSSS-Sci = Next Generation Sunshine State Standards for Science

Note: This course is pending alignment in the following categories: FS-M/LA and NGSSS-Sci.

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
01.0 Demonstrate safe and efficient work practices – the student will be able to:		
01.07 Incorporate safety precautions and practices into the production process.		
02.0 Demonstrate the ability to execute the steps in the digital video pre-production process – the student will be able to:		
02.10 Develop appropriate script writing formats for specified production types (e.g., news story, commercial, sports, PSA, narrative).		
02.11 Write stories/scripts that contain a logical beginning, middle, and end.		
02.12 Write scripts that convey a variety of desired story elements.		
02.13 Describe the components of a two-column script.		
02.14 Explain the components of a storyboard.		
03.0 Demonstrate the ability to successfully complete the digital video production process – the student will be able to:		
03.10 Perform field production tasks that include camera, lighting, and sound responsibilities.		
03.11 Demonstrate basic field camera operations.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
03.12 Demonstrate the set up and operation of basic studio equipment.		
03.13 Demonstrate basic studio camera operation.		
04.0 Create appropriate lighting for location and/or set productions – the student will be able to:		
04.07 Utilize the appropriate studio lighting for a production.		
04.08 Evaluate the lighting requirements of potential shooting locations for a project.		
05.0 Record, mix, and edit audio resources – the student will be able to:		
05.10 Demonstrate the proper placement of microphones for the effective recording of audio.		
05.11 Connect microphones to ancillary audio equipment using the correct cables and/or adapters.		
06.0 Demonstrate the ability to successfully complete the digital video post-production process – the student will be able to:		
06.11 Explain the need for data management.		
06.12 Organize and evaluate materials for editing.		
06.13 Capture/import source materials.		
06.14 Manipulate video (e.g., color, motion, filters, transitions).		
07.0 Design and generate graphic elements – the student will be able to:		
07.10 Utilize effective visual techniques to enhance a production.		

**Florida Department of Education
Student Performance Standards**

Course Title: Digital Video Technology 4
Course Number: 8201440
Course Credit: 1

Course Description:

Students will demonstrate proficiency in all phases of the digital video production process (pre-production, production, post-production).

Abbreviations:

FS-M/LA = Florida Standards for Math/Language Arts
 NGSSS-Sci = Next Generation Sunshine State Standards for Science

Note: This course is pending alignment in the following categories: FS-M/LA and NGSSS-Sci.

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
01.0 Demonstrate safe and efficient work practices – the student will be able to:		
01.08 Demonstrate the ability to maintain a safe and orderly work environment.		
01.09 Maintain and troubleshoot tools and equipment.		
02.0 Demonstrate the ability to execute the steps in the digital video pre-production process – the student will be able to:		
02.15 Conduct research for a specified project.		
02.16 Demonstrate knowledge of casting for a production; conduct an audition.		
03.0 Demonstrate the ability to successfully complete the digital video production process – the student will be able to:		
03.14 Create a project on location using field equipment and techniques.		
03.15 Produce a studio-based project.		
04.0 Create appropriate lighting for location and/or set productions.		
04.09 Design a lighting plan for specified productions.		

CTE Standards and Benchmarks		FS-M/LA	NGSSS-Sci
05.0	Record, mix, and edit audio resources – the student will be able to:		
05.12	Utilize multiple audio sources to complete a project (e.g., sound effects, room tone, music).		
06.0	Demonstrate the ability to successfully complete the digital video post-production process – the student will be able to:		
06.15	Apply the principles of editing to a production project.		
07.0	Design and generate graphic elements – the student will be able to		
07.11	Incorporate multiple graphic elements into a production to increase effectiveness.		

**Florida Department of Education
Student Performance Standards**

Course Title: Digital Video Technology 5
Course Number: 8201450
Course Credit: 1

Course Description:

Students will demonstrate professionalism, develop interviewing skills, perform on camera in video productions, and complete all phases in the digital video production process.

Abbreviations:

FS-M/LA = Florida Standards for Math/Language Arts
 NGSSS-Sci = Next Generation Sunshine State Standards for Science

Note: This course is pending alignment in the following categories: FS-M/LA and NGSSS-Sci.

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
08.0 Demonstrate professionalism and personal responsibility – the student will be able to:		
08.01 Exhibit professional conduct and work ethics in the development of video productions.		
08.02 Discuss appropriate responses to criticism.		
09.0 Develop interviewing skills – the student will be able to:		
09.01 Develop open-ended questions to elicit detailed responses.		
09.02 Select appropriate subjects to interview based on a specific topic.		
09.03 Select an effective location that complements the interview.		
09.04 Contact potential subjects and schedule an interview.		
09.05 Conduct an interview using coherent and concise language and correct grammar.		
10.0 Demonstrate the ability to perform on camera – the student will be able to:		
10.01 Demonstrate appropriate speaking skills for an on-camera performance (e.g., pitch, tone, emphasis, inflection, enunciation, timing).		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
10.02 Practice appropriate on-camera performance skills (e.g., appearance, gestures, posture).		
10.03 Perform as talent in a production.		
10.04 Deliver material without bias.		
10.05 Select clothing, makeup, and accessories appropriate for use on camera in a specified production.		
11.0 Demonstrate the ability to complete the pre-production process for an advanced video production project – the student will be able to:		
11.01 Define the objective and intended audience for an advanced video production project (e.g., music video, documentary).		
11.02 Determine a budget (real or simulated) for the production project.		
11.03 Understand the role of planned distribution in the video production process.		
11.04 Prepare a detailed treatment, create a storyboard, and write a full script for an advanced video production project (e.g., music video, documentary).		
11.05 Designate cast and crew members for the production.		
11.06 Plan and hold a pre-production meeting.		
11.07 Create a schedule for the production project; scout and select the location, secure any required permits (real or simulated), request equipment, and set a contingency plan in case of weather or other delays.		
12.0 Demonstrate the ability to complete the production process for an advanced video production project – the student will be able to:		
12.01 Demonstrate knowledge of camera systems and functions and camera support systems.		
12.02 Operate current industry-standard video production equipment in studio and location (field) production environments.		
12.03 Plan and execute a video shoot to obtain the required action/footage and effects.		
12.04 Plan and record the required audio and video for a video production project.		
12.05 Perform production tasks that include camera, lighting, and sound responsibilities.		
13.0 Demonstrate the ability to complete the post-production process for an advanced video production project – the student will be able to:		
13.01 Demonstrate knowledge of encoding and transcoding (direct conversion).		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
13.02 Demonstrate the ability to encode and/or transcode raw video for web-based delivery and other platforms.		
13.03 Demonstrate the ability to mix multiple sources in a post-production setting.		
13.04 Perform sound edits and enhancements.		
13.05 Enhance a digital video project by using appropriate graphics and visual effects.		

**Florida Department of Education
Student Performance Standards**

Course Title: Digital Video Technology 6
Course Number: 8201460
Course Credit: 1

Course Description:

This course requires the student to plan, coordinate, and manage all aspects of a video or webcast production.

Abbreviations:

FS-M/LA = Florida Standards for Math/Language Arts
 NGSSS-Sci = Next Generation Sunshine State Standards for Science

Note: This course is pending alignment in the following categories: FS-M/LA and NGSSS-Sci.

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
08.0 Demonstrate professionalism and personal responsibility – the student will be able to:		
08.03 Demonstrate appropriate professional dress and demeanor.		
08.04 Exhibit the ability to give and follow instructions.		
09.0 Develop interviewing skills – the student will be able to:		
09.06 Recognize the differences between biased and unbiased questions and answers.		
09.07 Demonstrate effective listening skills.		
09.08 Improvise questions and/or discussion based on the subject’s responses.		
14.0 Plan, coordinate, and manage a video or webcast production – the student will be able to:		
14.01 Understand how to develop a budget for a digital video project.		
14.02 Produce and direct high-quality digital video production projects.		
14.03 Utilize the equipment and technology appropriate for pre-production, production, and post-production of a digital video project.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
14.04 Demonstrate knowledge of graphic image types, file formats, and the technical requirements for a production.		
14.05 Demonstrate the ability to use type, color, composition and graphic elements for a specific production effect.		
15.0 Demonstrate awareness of industry-related ethics and laws – the student will be able to:		
15.01 Define terminology related to ethics and laws (e.g., plagiarism, copyright law, libel, slander).		
15.02 Discuss how to legally obtain and use source materials.		
15.03 Explain copyright laws and issues related to digital video production.		
15.04 Summarize and explain the legal and ethical acquisition and use of digital materials; appropriately cite sources.		
15.05 Research Federal Communications Commission (FCC) regulations related to digital video production and distribution.		
16.0 Demonstrate knowledge of the marketing and distribution phase of digital video production – the student will be able to:		
16.01 Understand the variations in creating video for different delivery methods (e.g., web delivery, broadcast, presentation at an event).		
16.02 Create a demo reel to showcase work samples to potential customers/clients.		
16.03 Understand the differences in terms of content and identify what works best for web-based distribution.		
16.04 Determine the role of social media in the marketing and distribution of digital videos.		
16.05 Understand industry standards related to video usage and metrics (e.g., view time, popular content types, social implications, click-to-action data).		
16.06 Conduct market research.		
16.07 Demonstrate the ability to network with customers/clients and others in the industry.		
16.08 Market a finished digital video product.		
17.0 Demonstrate an understanding of employability in the digital video production industry – the student will be able to:		
17.01 Create a résumé, a list of references, and a letter of interest.		
17.02 Identify common industry-related interview questions.		
17.03 Conduct a job search.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
17.04 Finalize a professional portfolio.		

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 occupational standards and benchmarks outlined in this secondary program correlate to the standards and benchmarks of the postsecondary program with the same Classification of Instructional Programs (CIP) number.

MyCareerShines is an interactive resource to assist students in identifying their ideal career and to enhance preparation for employment. Teachers are encouraged to integrate this resource into the program curriculum to meet the employability goals for each student.

Career and Technical Student Organization (CTSO)

SkillsUSA is the intercurricular career and technical student organization(s) 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.

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 Occupational Completion Point (OCP) or a Modified Occupational Completion Point (MOCP). 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 an OCP/MOCP. The student should work on different competencies and new applications of competencies each year toward completion of the OCP/MOCP. 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: Television Production Technology
Program Type: Career Preparatory
Career Cluster: Arts, A/V Technology and Communication

Secondary – Career Preparatory

Program Number	8201500
CIP Number	0610020217
Grade Level	9-12
Standard Length	8 credits
Teacher Certification	Refer to the <u>Program Structure</u> section.
CTSO	SkillsUSA
SOC Codes (all applicable)	27-4032 – Film and Video Editors 27-4031 – Camera Operators, Television, Video, and Motion Picture

Purpose

The purpose of this program is to prepare students for initial employment as television production operators, television broadcast technicians, camera operators, other professional/para-professional technicians, video recording engineers, and audio recording engineers.

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 Arts, A/V Technology and Communication 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 Arts, A/V Technology and Communication career cluster.

The content includes, but is not limited to, communication skills, leadership skills, human relations and employability skills, safe and efficient work practices, and preparation to assume responsibility for the television production studio activities (e.g., scriptwriting, lighting, shooting and directing, electronic news gathering, and field production).

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 three 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 secondary program structure:

OCP	Course Number	Course Title	Teacher Certification	Length	SOC Code	Level	Graduation Requirement		
A	8201510	Television Production Technology 1	BUS ED 1 @2 @4 TEC ED 1 @ 2 ENG&TEC ED1@2 TV PRO TEC @ 7 7G	3 credits	27-4031	2	PA		
	8201520	Television Production Technology 2				2	PA		
	8201530	Television Production Technology 3				3	PA		
B	8201540	Television Production Technology 4		BUS ED 1 @2 @4 TEC ED 1 @ 2 ENG&TEC ED1@2 TV PRO TEC @ 7 7G	3 credits	27-4031	3	PA	
	8201550	Television Production Technology 5					3	PA	
	8201560	Television Production Technology 6					3	PA	
C	8201570	Television Production Technology 7			BUS ED 1 @2 @4 TEC ED 1 @ 2 ENG&TEC ED1@2 TV PRO TEC @ 7 7G	2 credits	27-4032	3	PA
	8201580	Television Production Technology 8						3	PA

(Graduation Requirement Abbreviations- EQ= Equally Rigorous Science, PA= Practical Arts, EC= Economics)

Academic Alignment Tables

Academic alignment is an ongoing, collaborative effort of professional educators specializing in the fields of science, mathematics, English/language arts, and Career and Technical Education (CTE). This initiative supports CTE programs by improving student performance through the integration of academic content within CTE courses. Career and Technical Education courses that have been aligned to the Next Generation Sunshine State Standards for Science and the Florida Standards for Mathematics and English/Language Arts will show the following data: the quantity of academic standards in the CTE course; the total number of standards contained in the academic course; and the percentage of alignment to the CTE course.

Courses	Anatomy/Physiology Honors	Astronomy Solar/Galactic Honors	Biology 1	Chemistry 1	Earth-Space Science	Environmental Science	Genetics	Integrated Science	Marine Science 1 Honors	Physical Science	Physics 1
8201510	**	**	**	**	**	**	**	**	**	**	**
8201520	**	**	**	**	**	**	**	**	**	**	**
8201530	**	**	**	**	**	**	**	**	**	**	**
8201540	**	**	**	**	**	**	**	**	**	**	**
8201550	**	**	**	**	**	**	**	**	**	**	**
8201560	**	**	**	**	**	**	**	**	**	**	**
8201570	**	**	**	**	**	**	**	**	**	**	**

8201580	**	**	**	**	**	**	**	**	**	**	**
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** Alignment pending review

Alignment attempted, but no correlation to academic course

Courses	Algebra 1	Algebra 2	Geometry	English 1	English 2	English 3	English 4
8201510	**	**	**	**	**	**	**
8201520	**	**	**	**	**	**	**
8201530	**	**	**	**	**	**	**
8201540	**	**	**	**	**	**	**
8201550	**	**	**	**	**	**	**
8201560	**	**	**	**	**	**	**
8201570	**	**	**	**	**	**	**
8201580	**	**	**	**	**	**	**

** Alignment pending review

Alignment attempted, but no correlation to academic course

Florida Standards for Technical Subjects

Florida Standards (FS) for English Language Arts and Literacy in History/Social Studies, Science, and Technical Subjects are the critical reading and writing literacy standards designed for grade 6 and above. These standards are predicated on teachers of history/social studies, science, and technical subjects using their content area expertise to help students meet the particular challenges of reading, writing, speaking, listening, and language in their respective fields. The FS for Mathematical Practices are designed for grades K-12 and describe varieties of expertise that educators at all levels should seek to develop in their students. These practices rest on important “processes and proficiencies” with longstanding importance in mathematics education.

Instructors must incorporate the Florida Standards for Technical Subjects and Mathematical Practices throughout instruction of this CTE program.

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.

Common Career Technical Core – Career Ready Practices

Career Ready Practices describe the career-ready skills that educators should seek to develop in their students. These practices are not exclusive to a Career Pathway, program of study, discipline or level of education. Career Ready Practices should be taught and reinforced in all career exploration and preparation programs with increasingly higher levels of complexity and expectation as a student advances through a program of study.

1. Act as a responsible and contributing citizen and employee.
2. Apply appropriate academic and technical skills.
3. Attend to personal health and financial well-being.
4. Communicate clearly, effectively and with reason.
5. Consider the environmental, social and economic impacts of decisions.
6. Demonstrate creativity and innovation.
7. Employ valid and reliable research strategies.
8. Utilize critical thinking to make sense of problems and persevere in solving them.
9. Model integrity, ethical leadership and effective management.
10. Plan education and career path aligned to personal goals.
11. Use technology to enhance productivity.
12. Work productively in teams while using cultural/global competence.

Standards

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

- 01.0 Apply knowledge of safety procedures and industry-related terminology.
- 02.0 Identify lighting needs and perform lighting tasks for a planned production.
- 03.0 Demonstrate correct use of television production equipment.
- 04.0 Interpret scripts for a television production.
- 05.0 Collaborate with others as part of the television production team.
- 06.0 Perform audio recording and editing operations.
- 07.0 Perform video recording and editing operations.
- 08.0 Conduct research for the development of a television production.
- 09.0 Operate editing software.
- 10.0 Stage a set as directed for a television production.
- 11.0 Perform character generation.
- 12.0 Perform television production and programming activities.
- 13.0 Create a television program.
- 14.0 Research and select one or more areas of television production for specialization.
- 15.0 Perform Electronic News Gathering (ENG) and Electronic Field Production (EFP) equipment functions.
- 16.0 Plan, produce, and direct a television production.

**Florida Department of Education
Student Performance Standards**

Course Title: Television Production Technology 1
Course Number: 8201510
Course Credit: 1

Course Description:

This course covers competencies in safety, lighting tasks, the use of basic television production equipment, scriptwriting, collaboration, research, and audio and video recording and editing.

Abbreviations:

FS-M/LA = Florida Standards for Math/Language Arts
 NGSSS-Sci = Next Generation Sunshine State Standards for Science

Note: This course is pending alignment in the following categories: FS-M/LA and NGSSS-Sci.

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
01.0 Apply knowledge of safety procedures and industry-related terminology – the student will be able to:		
01.01 Follow classroom procedures.		
01.02 State and apply general safety rules for the operation of equipment and participation in lab-based activities.		
02.0 Identify lighting needs and perform lighting tasks for a planned production – the student will be able to:		
02.01 Describe different types of lighting fixtures.		
02.02 Identify the parts of lighting fixtures and lighting accessories.		
03.0 Demonstrate correct use of television production equipment – the student will be able to:		
03.01 Use basic equipment in a television production studio.		
04.0 Interpret scripts for a television production – the student will be able to:		
04.01 Identify scripts by format, function, and utilization.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
04.02 Define the terminology used in broadcast scriptwriting.		
04.03 Specify the steps leading to broadcast scripts.		
05.0 Collaborate with others as part of the television production team – the student will be able to:		
05.01 List the job functions of the television production team.		
05.02 Describe the steps in the production process.		
06.0 Perform audio recording and editing operations – the student will be able to:		
06.01 Set up, turn on, and operate audio production equipment.		
06.02 Identify types of audio connectors.		
06.03 Identify, select, and demonstrate the appropriate use of microphones.		
06.04 Identify the qualities of a good audio track.		
07.0 Perform video recording and editing operations – the student will be able to:		
07.01 Set up, turn on, and operate a video camera.		
07.02 Identify types of video connectors.		
07.03 Load, cue, transfer, record, and play video in a variety of media formats.		
08.0 Conduct research for the development of a television production – the student will be able to:		
08.01 Complete an Internet search for viable information to use in scripting a project.		
08.02 Identify valid websites for information retrieval.		
09.0 Operate editing software – the student will be able to:		
09.01 Perform basic audio and video editing operations.		

**Florida Department of Education
Student Performance Standards**

Course Title: Television Production Technology 2
Course Number: 8201520
Course Credit: 1

Course Description:

Students explore script writing, audio and video recording and editing, set staging, and character generation.

Abbreviations:

FS-M/LA = Florida Standards for Math/Language Arts
 NGSSS-Sci = Next Generation Sunshine State Standards for Science

Note: This course is pending alignment in the following categories: FS-M/LA and NGSSS-Sci.

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
01.0 Apply knowledge of safety procedures and industry-related terminology – the student will be able to:		
01.03 Utilize industry-related terminology.		
01.04 Utilize trade abbreviations and acronyms.		
02.0 Identify lighting needs and perform lighting tasks for a planned production – the student will be able to:		
02.03 Set up appropriate lighting for a production.		
02.04 Analyze the lighting needs for a specified television production.		
03.0 Demonstrate correct use of television production equipment – the student will be able to:		
03.02 Operate teleprompting devices.		
04.0 Interpret scripts for a television production – the student will be able to:		
04.04 Write a script in single-column format.		
04.05 Write a script in two-column format.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
04.06 Write a treatment.		
05.0 Collaborate with others as part of the television production team – the student will be able to:		
05.03 Give and follow directions.		
06.0 Perform audio recording and editing operations – the student will be able to:		
06.05 Identify and select microphones for a television production project.		
06.06 Place microphones for maximum effect.		
06.07 Load, cue, transfer, record, and play audio in a variety of media formats.		
06.08 Describe audio input and output devices.		
06.09 Set up audio input and output devices for a television production.		
06.10 Operate audio input and output devices for a television production.		
07.0 Perform video recording and editing operations – the student will be able to:		
07.04 Demonstrate picture composition principles.		
07.05 Describe video input and output devices for a television production.		
07.06 Set up video input and output devices for a television production.		
07.07 Operate video input and output devices during recording and playback.		
07.08 Perform video recording operations.		
08.0 Conduct research for the development of a television production – the student will be able to:		
08.03 Maintain journalistic integrity.		
09.0 Operate editing software – the student will be able to:		
09.02 Transfer and log video.		
09.03 Prepare graphics for a production.		
09.04 Combine elements into a program.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
09.05 Select the best source material to achieve program goals [e.g., voice over (VO), sound on tape (SOT)].		
10.0 Stage a set as directed for a television production – the student will be able to:		
10.01 Dress a set for a television production.		
10.02 Inspect for and correct safety concerns.		
11.0 Perform character generation (CG) – the student will be able to:		
11.01 Create television graphics using industry standard equipment.		
11.02 Understand television safe areas (title-safe area / graphics-safe area) and color design.		
11.03 Create CGs by adhering to the rule of thirds.		

**Florida Department of Education
Student Performance Standards**

Course Title: Television Production Technology 3
Course Number: 8201530
Course Credit: 1

Course Description:

Students will perform lighting tasks, record and edit audio and video, and participate in all aspects of the television production process – from the initial stages of program creation to final editing.

Abbreviations:

FS-M/LA = Florida Standards for Math/Language Arts
 NGSSS-Sci = Next Generation Sunshine State Standards for Science

Note: This course is pending alignment in the following categories: FS-M/LA and NGSSS-Sci.

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
01.0 Apply knowledge of safety procedures and industry-related terminology – the student will be able to:		
01.05 Transport equipment safely and securely.		
01.06 Store equipment appropriately.		
02.0 Identify lighting needs and perform lighting tasks for a planned production – the student will be able to:		
02.05 Identify the correct bulb for a specific light fixture.		
02.06 Replace a bulb in a light fixture.		
02.07 Use the appropriate gear and/or techniques to ensure that the bulbs are not exposed to human contact (to avoid oils on the surface).		
03.0 Demonstrate correct use of television production equipment – the student will be able to:		
03.03 Demonstrate the ability to inventory equipment.		
03.04 Demonstrate basic equipment maintenance and management.		

CTE Standards and Benchmarks	FS-M/LA	NGSS-Sci
04.0 Interpret scripts for a television production – the student will be able to:		
04.07 Write a broadcast script; include location information, camera movements, and dialogue.		
04.08 Plan and produce a storyboard.		
04.09 Draw a storyboard for a public service announcement (PSA).		
05.0 Collaborate with others as part of the television production team – the student will be able to:		
05.04 Participate in all aspects of the production process (pre-production, production, post-production).		
05.05 Demonstrate the ability to collaborate with others in the television production work environment.		
06.0 Perform audio recording and editing operations – the student will be able to:		
06.11 Perform audio recording operations.		
06.12 Select appropriate audio cables for use in a television production.		
06.13 Set up audio monitors for a production.		
06.14 Describe the parts of an audio mixing console.		
07.0 Perform video recording and editing operations – the student will be able to:		
07.09 Describe the operational parts of a video recording device.		
07.10 Operate video recording devices to record and play back material.		
07.11 Select appropriate video cables for use in a television production.		
07.12 Troubleshoot cable connections.		
07.13 Set up video monitors for a production.		
07.14 Describe the functions of a Camera Control Unit (CCU).		
07.15 Match video signals from studio cameras.		
07.16 Operate a video switcher.		
08.0 Conduct research for the development of a television production – the student will be able to:		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
08.04 Demonstrate the ability to correctly cite sources.		
09.0 Operate editing software – the student will be able to:		
09.06 Control audio mix and effects.		
09.07 Edit a shot sequence or story for continuity.		
09.08 Create a finished video file.		
12.0 Perform television production and programming activities – the student will be able to:		
12.01 Direct participants in the production of a television program.		
12.02 Perform on-camera in a television program.		
12.03 Function in the role of a producer for a television program.		
12.04 Apply production skills by producing a television program.		
13.0 Create a television program – the student will be able to:		
13.01 Plan a television program.		
13.02 Write a television program.		
13.03 Direct a television program.		
13.04 Record a television program.		
13.05 Edit a television program.		

**Florida Department of Education
Student Performance Standards**

Course Title: Television Production Technology 4
Course Number: 8201540
Course Credit: 1

Course Description:

Students will perform advanced lighting tasks for television productions, demonstrate the mastery of competencies related to audio and video recording and editing operations, interpret scripts for television productions, and collaborate with others as part of the television production team.

Abbreviations:

FS-M/LA = Florida Standards for Math/Language Arts
 NGSSS-Sci = Next Generation Sunshine State Standards for Science

Note: This course is pending alignment in the following categories: FS-M/LA and NGSSS-Sci.

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
01.0 Apply knowledge of safety procedures and industry-related terminology – the student will be able to:		
01.07 Explain the care, storage, and use of television hardware and software.		
02.0 Identify lighting needs and perform lighting tasks for a planned production – the student will be able to:		
02.08 Demonstrate basic television lighting capabilities.		
02.09 Perform lighting activities for a planned production.		
02.10 Describe the functions of the master lighting panel and dimmer board.		
02.11 Operate a master lighting panel and dimmer board.		
03.0 Demonstrate correct use of television production equipment – the student will be able to:		
03.05 Perform Society of Motion Picture and Television Engineers (SMPTE) time code calculations.		
04.0 Interpret scripts for a television production – the student will be able to:		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
04.10 Demonstrate skill in the selection of production topics.		
04.11 Determine the quality of production topics.		
04.12 Use the correct script format for the type of program selected (e.g., documentary, drama, infomercial).		
04.13 Develop a script for a narrated program.		
05.0 Collaborate with others as part of the television production team – the student will be able to:		
05.06 Adhere to production deadlines set by others.		
05.07 Demonstrate appropriate communication skills.		
06.0 Perform audio recording and editing operations – the student will be able to:		
06.15 Operate a television studio audio control system.		
06.16 Identify and select microphones for a television production project.		
06.17 Place microphones for maximum effect in a television production.		
06.18 Identify and describe the parts of sound recording and playback devices.		
06.19 Operate sound recording and playback devices for a television production.		
07.0 Perform video recording and editing operations – the student will be able to:		
07.17 Identify and describe different video recording devices.		
08.0 Conduct research for the development of a television production – the student will be able to:		
08.05 Utilize the Internet to research specific information on an assigned production topic.		

**Florida Department of Education
Student Performance Standards**

Course Title: Television Production Technology 5
Course Number: 8201550
Course Credit: 1

Course Description:

This course requires students to perform advanced audio and video recording and editing operations; students will collaborate with other members of the production team to create a television program.

Abbreviations:

FS-M/LA = Florida Standards for Math/Language Arts
 NGSSS-Sci = Next Generation Sunshine State Standards for Science

Note: This course is pending alignment in the following categories: FS-M/LA and NGSSS-Sci.

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
02.0 Identify lighting needs and perform lighting tasks for a planned production – the student will be able to:		
02.12 Select special effects lighting for a planned production.		
02.13 Use lighting instruments to create the mood for a production.		
02.14 Use appropriate lighting accessories (e.g., gels, reflectors) to enhance a production.		
03.0 Demonstrate correct use of television production equipment – the student will be able to:		
03.06 Demonstrate industry accepted skills for studio productions.		
04.0 Interpret scripts for a television production – the student will be able to:		
04.14 Demonstrate advanced scriptwriting techniques.		
04.15 Write a broadcast script for a program of specified length.		
05.0 Collaborate with others as part of the television production team – the student will be able to:		
05.08 Set production deadlines for a specified program.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
05.09 Function as a member of a production team.		
06.0 Perform audio recording and editing operations – the student will be able to:		
06.20 Identify and describe the parts of an audio mixing console.		
06.21 Operate an audio mixing console for a television production.		
06.22 Set up digital audio editing equipment and/or software.		
06.23 Set up digital audio recording and playback devices.		
07.0 Perform video recording and editing operations – the student will be able to:		
07.18 Set up digital video editing equipment and/or software.		
07.19 Set up digital video recording and playback devices.		
08.0 Conduct research for the development of a television production – the student will be able to:		
08.06 Analyze and consolidate information for use in graphs and charts.		
09.0 Operate editing software – the student will be able to:		
09.09 Perform advanced editing procedures to meet audio and video production requirements.		
10.0 Stage a set as directed for a television production – the student will be able to:		
10.03 Sketch a set plan.		
13.0 Create a television program – the student will be able to:		
13.06 Write, produce, direct, record, and edit a variety of television programs (e.g., news, editorials, features, commercials).		

**Florida Department of Education
Student Performance Standards**

Course Title: Television Production Technology 6
Course Number: 8201560
Course Credit: 1

Course Description:

Students demonstrate competency in advanced scriptwriting, program production, and advanced digital audio and video recording and editing operations.

Abbreviations:

FS-M/LA = Florida Standards for Math/Language Arts
 NGSSS-Sci = Next Generation Sunshine State Standards for Science

Note: This course is pending alignment in the following categories: FS-M/LA and NGSSS-Sci.

CTE Standards and Benchmarks		FS-M/LA	NGSSS-Sci
02.0	Identify lighting needs and perform lighting tasks for a planned production – the student will be able to:		
02.15	Perform basic maintenance for lighting instruments.		
03.0	Demonstrate correct use of television production equipment – the student will be able to:		
03.07	Operate television studio equipment.		
04.0	Interpret scripts for a television production – the student will be able to:		
04.16	Translate a written script into a full television production.		
04.17	Produce a television program from a written script.		
05.0	Collaborate with others as part of the television production team – the student will be able to:		
05.10	Receive and respond to comments and feedback.		
06.0	Perform audio recording and editing operations – the student will be able to:		
06.24	Perform advanced audio recording and editing operations.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
07.0 Perform video recording and editing operations – the student will be able to:		
07.20 Perform advanced video recording and editing operations.		
10.0 Stage a set as directed for a television production – the student will be able to:		
10.04 Accurately prepare a set according to the sketched plan; inspect for and correct safety concerns.		
13.0 Create a television program – the student will be able to:		
13.07 Plan, write, direct, record, and edit a television program with a minimum program length of ten (10) minutes.		

**Florida Department of Education
Student Performance Standards**

Course Title: Television Production Technology 7
Course Number: 8201570
Course Credit: 1

Course Description:

Students will demonstrate skills related to Electronic News Gathering (ENG) and Electronic Field Production (EFP) equipment functions. The student will select an area of television production for specialization.

Abbreviations:

FS-M/LA = Florida Standards for Math/Language Arts
 NGSSS-Sci = Next Generation Sunshine State Standards for Science

Note: This course is pending alignment in the following categories: FS-M/LA and NGSSS-Sci.

CTE Standards and Benchmarks		FS-M/LA	NGSSS-Sci
14.0	Research and select one or more areas of television production for specialization – the student will be able to:		
14.01	Survey and select a specialization in the field of television production.		
14.02	Perform research on position availability, training requirements, and post-secondary institutions with programs of study or emphasis in the selected specialization.		
14.03	Demonstrate proficiency in the selected area of specialization.		
14.04	Perform independently within the selected area of specialization.		
14.05	Write, produce, direct, record, and edit a variety of television production programs (e.g., news, editorials, features, commercials).		
15.0	Perform Electronic News Gathering (ENG) and Electronic Field Production (EFP) equipment functions – the student will be able to:		
15.01	Identify and describe ENG and EFP equipment components.		
15.02	Set up equipment for a field production.		
15.03	Operate equipment during field production segments.		

**Florida Department of Education
Student Performance Standards**

Course Title: Television Production Technology 8
Course Number: 8201580
Course Credit: 1

Course Description:

Students will plan, produce, and direct a complete television production/program.

Abbreviations:

FS-M/LA = Florida Standards for Math/Language Arts
 NGSSS-Sci = Next Generation Sunshine State Standards for Science

Note: This course is pending alignment in the following categories: FS-M/LA and NGSSS-Sci.

CTE Standards and Benchmarks		FS-M/LA	NGSSS-Sci
14.0	Research and select one or more areas of television production for specialization – the student will be able to:		
14.06	Create usable end products for the area of specialization.		
14.07	Create training materials related to the area of specialization.		
14.08	Demonstrate proficiency in all aspects of the chosen area of specialization.		
14.09	Create and maintain a professional portfolio.		
14.10	Prepare a résumé for employment in the chosen specialization.		
14.11	Demonstrate a high level of proficiency in the selected area of specialization.		
16.0	Plan, produce, and direct a television production – the student will be able to:		
16.01	Plan a television production.		
16.02	Write a script for a television production.		
16.03	Stage and direct a television production.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
16.04 Select special effects lighting for a television production.		
16.05 Select and use audio and video recording equipment.		
16.06 Perform digital audio and video editing operations.		
16.07 Finalize a professional portfolio; include a résumé and work samples.		

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 occupational standards and benchmarks outlined in this secondary program correlate to the standards and benchmarks of the postsecondary program with the same Classification of Instructional Programs (CIP) number.

MyCareerShines is an interactive resource to assist students in identifying their ideal career and to enhance preparation for employment. Teachers are encouraged to integrate this resource into the program curriculum to meet the employability goals for each student.

Career and Technical Student Organization (CTSO)

SkillsUSA is the intercurricular career and technical student organization(s) 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.

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 Occupational Completion Point (OCP) or a Modified Occupational Completion Point (MOCP). 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 an OCP/MOCP. The student should work on different competencies and new applications of competencies each year toward completion of the OCP/MOCP. 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: Digital Design
Program Type: Career Preparatory
Career Cluster: Arts, A/V Technology and Communication

Secondary – Career Preparatory

Program Number	8209600
CIP Number	0510030306
Grade Level	9-12
Standard Length	8 credits
Teacher Certification	Refer to the <u>Program Structure</u> section.
CTSO	SkillsUSA
SOC Codes (all applicable)	27-1014 – Multimedia Artists and Animators 27-1024 – Graphic Designers 43-9031 – Desktop Publishers 15-1151 – Computer User Support Specialists

Purpose

The purpose of this program is to prepare students for employment in the Digital Design industry as Information Technology Assistants, Production Assistants, Digital Assistant Designers, Graphic Designers, and Multimedia Designers.

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and the relevant technical knowledge and skills needed to prepare for further education and careers in the Arts, A/V Technology and Communication 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 Arts, A/V Technology and Communication career cluster.

The content includes, but is not limited to, enhanced practical experiences in computer-generated art and text, graphic design, graphic production, digital design skills, preparation of digital layouts and illustrations, scanning, and the development of specialized multimedia presentations.

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 five 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 secondary program structure:

OCP	Course Number	Course Title	Teacher Certification	Length	SOC Code	Level	Graduation Requirement
A	8207310	Digital Information Technology	DIT Teacher Certifications	1 credit	15-1151	2	PA
B	8209510	Digital Design 1	BUS ED 1 @2 CLERICAL @7 7G COMM ART @7 7G COMP SCI 6@2 MANAG SUPV 7G SECRETAR 7 G TC COOP ED @7 ELECT DP @7 %G ENG&TEC ED1@2	1 credit	43-9031	2	PA
C	8209520	Digital Design 2	BUS DP @7 %G BUS ED 1 @2 CLERICAL @7 7G COMM ART @7 7G COMP SCI 6 @2 ELECT DP @7 %G PRINTING @7 7G SECRETAR 7 G TC COOP ED @7 TEC ED 1 @2 ENG&TEC ED1@2 TEC ELEC \$7 G VOE @7	1 credit	43-9031	3	PA
	8209530	Digital Design 3		1 credit		3	PA
D	8209540	Digital Design 4	BUS DP @7 %G BUS ED 1 @2 CLERICAL @7 7G COMM ART @7 7G COMP SCI 6 @2 ELECT DP @7 %G PRINTING @7 7G SECRETAR 7 G TC COOP ED @7 TEC ED 1 @2 ENG&TEC ED1@2 TEC ELEC \$7 G VOE @7	1 credit	27-1024	3	PA
	8209550	Digital Design 5		1 credit		3	PA
E	8209560	Digital Design 6	BUS DP @7 %G BUS ED 1 @2 CLERICAL @7 7G COMM ART @7 7G COMP SCI 6 @2 ELECT DP @7 %G PRINTING @7 7G SECRETAR 7 G TC COOP ED @7 TEC ED 1 @2 ENG&TEC ED1@2 TEC ELEC \$7 G VOE @7	1 credit	27-1014	3	PA
	8209570	Digital Design 7		1 credit		3	PA

(Graduation Requirement Abbreviations- EQ= Equally Rigorous Science, PA= Practical Arts, EC= Economics)

Academic Alignment Table

Academic alignment is an ongoing, collaborative effort of professional educators specializing in the fields of science, mathematics, English/language arts, and Career and Technical Education (CTE). This initiative supports CTE programs by improving student performance through the integration of academic content within CTE courses. Career and Technical Education courses that have been aligned to the Next Generation Sunshine State

Standards for Science and the Florida Standards for Mathematics and English/Language Arts will show the following data: the quantity of academic standards in the CTE course; the total number of standards contained in the academic course; and the percentage of alignment to the CTE course.

Courses	Anatomy/ Physiology Honors	Astronomy Solar/Galactic Honors	Biology 1	Chemistry 1	Earth- Space Science	Environmental Science	Genetics	Integrated Science	Marine Science 1 Honors	Physical Science	Physics 1
8207310	5/87 6%	5/80 6%	24/83 29%	5/69 7%	24/67 36%	5/70 7%	5/69 7%	24/82 29%	5/66 8%	24/74 32%	5/72 7%
8209510	4/87 5%	5/80 6%	22/83 27%	5/69 7%	23/67 34%	2/70 3%	4/69 6%	22/82 27%	4/66 6%	23/74 31%	5/72 7%
8209520	3/87 3%	4/80 5%	22/83 27%	4/69 6%	23/67 34%	3/70 4%	3/69 4%	22/82 27%	3/66 5%	23/74 31%	5/72 7%
8209530	21/87 24%	21/80 26%	2/83 2%	21/69 30%	2/67 3%	21/70 30%	21/69 30%	2/82 2%	16/66 24%	2/74 3%	21/72 29%
8209540	21/87 24%	22/80 28%	2/83 2%	22/69 32%	3/67 4%	21/70 30%	21/69 30%	2/82 2%	16/66 24%	3/74 4%	23/72 32%
8209550	#	#	#	#	#	#	#	#	#	#	1/72 1%
8209560	2/87 2%	2/80 3%	2/83 2%	2/69 3%	2/67 3%	2/70 3%	2/69 3%	2/82 2%	2/66 3%	2/74 3%	2/72 3%
8209570	#	#	2/83 2%	#	2/67 3%	#	#	2/82 2%	#	2/74 3%	#

** Alignment pending review

Alignment attempted, but no correlation to academic course

Courses	Algebra 1	Algebra 2	Geometry	English 1	English 2	English 3	English 4
8207310	20/67 30%	15/75 20%	18/54 33%	40/46 87%	40/45 89%	40/45 89%	40/45 89%
8209510	21/67 31%	14/75 19%	33/54 61%	5/46 11%	5/45 11%	5/45 11%	5/45 11%
8209520	17/67 25%	10/75 13%	16/54 30%	11/46 24%	11/45 24%	10/45 22%	10/45 22%
8209530	10/67 15%	16/75 21%	10/54 19%	9/46 20%	9/45 20%	9/45 20%	9/45 20%
8209540	9/67 13%	15/75 20%	19/54 35%	4/46 9%	4/45 9%	4/45 9%	4/45 9%
8209550	#	#	4/54 7%	1/46 2%	1/45 2%	1/45 2%	1/45 2%
8209560	1/67 1%	1/75 1%	2/54 4%	4/46 9%	4/45 9%	4/45 9%	4/45 9%
8209570	1/67 1%	1/75 1%	1/54 2%	4/46 9%	4/45 9%	4/45 9%	4/45 9%

** Alignment pending review

Alignment attempted, but no correlation to academic course

Florida Standards for Technical Subjects

Florida Standards (FS) for English Language Arts and Literacy in History/Social Studies, Science, and Technical Subjects are the critical reading and writing literacy standards designed for grade 6 and above. These standards are predicated on teachers of history/social studies, science, and technical subjects using their content area expertise to help students meet the particular challenges of reading, writing, speaking, listening, and language in their respective fields. The FS for Mathematical Practices are designed for grades K-12 and describe varieties of expertise that educators at all levels should seek to develop in their students. These practices rest on important “processes and proficiencies” with longstanding importance in mathematics education.

Instructors must incorporate the Florida Standards for Technical Subjects and Mathematical Practices throughout instruction of this CTE program.

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.

Common Career Technical Core – Career Ready Practices

Career Ready Practices describe the career-ready skills that educators should seek to develop in their students. These practices are not exclusive to a Career Pathway, program of study, discipline or level of education. Career Ready Practices should be taught and reinforced in all career exploration and preparation programs with increasingly higher levels of complexity and expectation as a student advances through a program of study.

1. Act as a responsible and contributing citizen and employee.
2. Apply appropriate academic and technical skills.
3. Attend to personal health and financial well-being.
4. Communicate clearly, effectively and with reason.
5. Consider the environmental, social and economic impacts of decisions.
6. Demonstrate creativity and innovation.
7. Employ valid and reliable research strategies.
8. Utilize critical thinking to make sense of problems and persevere in solving them.
9. Model integrity, ethical leadership and effective management.
10. Plan education and career path aligned to personal goals.
11. Use technology to enhance productivity.
12. Work productively in teams while using cultural/global competence.

Standards

Digital Information Technology (8207310) is the first course in this and other programs within the Business Management & Administration Career Cluster. Standards 01.0 – 14.0 are associated with this course.

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

- 01.0 Demonstrate knowledge, skill, and application of information systems to accomplish job objects and enhance workplace performance.
- 02.0 Develop an awareness of microprocessors and digital computers.
- 03.0 Demonstrate an understanding of operating systems.
- 04.0 Use technology to enhance the effectiveness of communication skills utilizing word processing applications.
- 05.0 Use technology to enhance communication skills utilizing presentation applications.
- 06.0 Use technology to enhance the effectiveness of communication utilizing spreadsheet and database applications.
- 07.0 Use technology to enhance communication skills utilizing electronic mail.
- 08.0 Investigate individual assessment and job/career exploration and individual career planning that reflect the transition from school to work, lifelong learning, and personal and professional goals.
- 09.0 Incorporate appropriate leadership and supervision techniques, customer service strategies, and standards of personal ethics to accomplish job objectives and enhance workplace performance.
- 10.0 Demonstrate competence using computer networks, Internet and online databases to facilitate collaborative or individual learning and communication.
- 11.0 Demonstrate competence in page design applicable to the WWW.
- 12.0 Develop an awareness of emerging technologies.
- 13.0 Develop awareness of computer languages and software applications.
- 14.0 Demonstrate comprehension and communication skills.
- 15.0 Demonstrate proficiency in computer skills.
- 16.0 Demonstrate knowledge of digital publishing concepts.
- 17.0 Perform decision-making activities.
- 18.0 Demonstrate proficiency in digital imaging.
- 19.0 Demonstrate proficiency in the safe and ethical use of the Internet to locate information.
- 20.0 Demonstrate the ability to set project requirements, engage in project planning, and utilize the design process.
- 21.0 Perform layout, project design, and measurement activities associated with digital planning.
- 22.0 Demonstrate an understanding of color theory and its role in digital design.
- 23.0 Demonstrate an understanding of typography.
- 24.0 Demonstrate basic skill in digital photography.
- 25.0 Demonstrate skill in the use of digital imaging software applications.
- 26.0 Develop an awareness of the emergent technologies associated with digital design.
- 27.0 Demonstrate proficiency in creating a simple website.
- 28.0 Demonstrate proficiency in digital publishing operations.
- 29.0 Demonstrate proficiency in digital imaging and in utilizing digital photography.
- 30.0 Consolidate coursework into a professional portfolio.
- 31.0 Demonstrate the ability to create a multimedia presentation.
- 32.0 Demonstrate promotion applications for a selected industry.

- 33.0 Demonstrate proficiency in website design.
- 34.0 Demonstrate proficiency in the use of web design software.
- 35.0 Demonstrate the ability to apply the design process.
- 36.0 Demonstrate the knowledge and skills relative to the design process.
- 37.0 Use computer network and web-based resources to facilitate collaborative communication.
- 38.0 Compare and contrast various digital media delivery systems.
- 39.0 Demonstrate proficiency in digital photography.
- 40.0 Plan, organize, and carry out collaborative digital design projects.
- 41.0 Demonstrate proficiency in creating and manipulating digital images using software applications.
- 42.0 Demonstrate proficiency in the creation of digital design solutions involving motion or special effects.
- 43.0 Demonstrate knowledge and skills relative to digital design.
- 44.0 Demonstrate the ability to assess the impact of digital products.
- 45.0 Demonstrate an understanding of career opportunities and requirements in the field of digital design.
- 46.0 Demonstrate an understanding of the use of emergent technologies in digital design and advertising.
- 47.0 Demonstrate proficiency in the creation of a digital design product using mobile communication devices.
- 48.0 Demonstrate advanced project design capabilities associated with digital publishing.
- 49.0 Demonstrate advanced ability to create and manipulate digital images using software applications.
- 50.0 Organize and carry out project plans for creating various digital design products.
- 51.0 Demonstrate understanding of the Elements and Principles of Art and Design.

**Florida Department of Education
Student Performance Standards**

Course Title: Digital Information Technology
Course Number: 8207310
Course Credit: 1

Course Description:

This course is designed to provide a basic overview of current business and information systems and trends, and to introduce students to fundamental skills required for today's business and academic environments. Emphasis is placed on developing fundamental computer skills. The intention of this course is to prepare students to be successful both personally and professionally in an information based society. Digital Information Technology includes the exploration and use of: databases, the Internet, spreadsheets, presentation applications, management of personal information and email, word processing and document manipulation, HTML, web page design, and the integration of these programs using software that meets industry standards. After successful completion of this core course, students will have met Occupational Completion Point A, Information Technology Assistant - SOC Code 15-1151.

Digital Information Technology (8207310) is part of several programs across the various CTE career clusters. To ensure consistency, the standards and benchmarks for this course (01.0 – 14.0) have been placed in a separate document.

**Florida Department of Education
Student Performance Standards**

Course Title: Digital Design 1
Course Number: 8209510
Course Credit: 1

Course Description:

This course is designed to develop the entry-level skills required for careers in digital design. The content includes computer skills; digital publishing concepts and operations; layout, design, and measurement activities; digital imaging; communication, collaboration and decision-making activities; critical thinking and problem-solving.

Abbreviations:

FS-M/LA = Florida Standards for Math/Language Arts
 NGSSS-Sci = Next Generation Sunshine State Standards for Science

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
15.0 Demonstrate proficiency in computer skills – the student will be able to:		
15.01 Utilize appropriate font management techniques (e.g., TrueType, OpenType, font installation/removal).		
15.02 Perform storage management (e.g., cloud-based services, USB drives).		
15.03 Perform basic maintenance of computers and peripherals.		
16.0 Demonstrate knowledge of digital publishing concepts – the student will be able to:		
16.01 Identify the skills required of a digital designer.		
16.02 Define the terms commonly used in graphic communications.	LAFS.910.L.3.6 LAFS.1112.L.3.6	
16.03 Identify the characteristics of paper (e.g., weight, point).	MAFS.912.N-Q.1.1,2,3 MAFS.912.G-SRT.1.1, 2,3 MAFS.912.G-SRT.2.4,5 MAFS.912.G-SRT.3.6,8 MAFS.912.A-SSE.1.1	
16.04 Identify different types of color (e.g., RGB, WebSafe, Pantone Color Matching System, HEX).	MAFS.912.G-CO.1.1,2,3,4,5 MAFS.912.G-CO.2.6,7,8 MAFS.912.G-CO.3.9	SC.912.P.10.18

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
	MAFS.912.G-CO.4.12 MAFS.912.G-GPE.2.4,7	
16.05 Identify the software used in digital publishing.		
17.0 Perform decision-making activities – the student will be able to:		
17.01 Determine work priorities.	MAFS.912.N-Q.1.1,2,3	
17.02 Use critical thinking skills to evaluate information and select relevant material.	LAFS.1112.W.2.5 LAFS.910.W.2.5 LAFS.910.W.3.8 LAFS.1112.W.3.8 MAFS.912.N-Q.1.1,2,3	SC.912.N.1.1
17.03 Determine the audience.	LAFS.910.W.2.4,5 LAFS.1112.W.2.4,5	
18.0 Demonstrate proficiency in digital imaging – the student will be able to:		
18.01 Demonstrate proper use of scanners, digital cameras, and various input devices.		
18.02 Proofread manually and digitally.		
19.0 Demonstrate proficiency in the safe and ethical use of the Internet to locate information – the student will be able to:		
19.01 Identify and use web-related terminology.		
19.02 Define <i>Universal Resource Locator</i> (URL) and associated protocols (e.g., http, ftp, telnet, mailto).		
19.03 Compare and contrast the various types of Internet domains (e.g., .com, .org, .edu, .gov, .net, .mil).		
19.04 Demonstrate proficiency using search engines, including Boolean search techniques.		
19.05 Apply the rules for properly citing works or other information obtained from the Internet.		
19.06 Identify and apply Copyright Fair Use guidelines.		
19.07 Evaluate web-based information for credibility and quality using basic guidelines and indicators (e.g., authority, affiliation, purpose).		
19.08 Demonstrate an understanding of safe and ethical Internet usage.		
19.09 Describe cyber-bullying and its impact on the victims and perpetrators.		
20.0 Demonstrate the ability to set project requirements, engage in project planning, and utilize the design process – the student will be able to:		

CTE Standards and Benchmarks		FS-M/LA	NGSSS-Sci
20.01	Identify the purpose, audience, and the needs of the audience for the preparation of design projects.		
20.02	Research and describe the implications of audience, purpose/message, and time constraints relative to a design project.		
20.03	Make decisions based on specifications.		
20.04	Research current applications and perspectives related to a project.		
20.05	Explain the relationship between design criteria and design constraints.		
20.06	Produce thumbnail sketches and rough designs.		
21.0	Perform layout, project design, and measurement activities associated with digital publishing – the student will be able to:		
21.01	Demonstrate an understanding of the elements and principles of design (e.g., line, shape, balance).		
21.02	Determine the appropriate type of basic layout for a specified problem (e.g., audience, purpose).		
21.03	Determine the activities and implications of content preparation and editing/proofreading.		
21.04	Develop and apply specifications for projects.		
21.05	Demonstrate basic technical skills using a desktop or digital publishing application (e.g., InDesign, Publisher).		
21.06	Identify distinct components in a layout (e.g., headlines, subheads, body copy).		
21.07	Demonstrate appropriate use of typography (visual hierarchy, proximity, alignment, contrast, repetition).		
21.08	Compare and contrast methods of measurement used in desktop publishing (e.g., inches, centimeters, millimeters, points, picas).		
21.09	Produce a variety of designs using digital publishing applications (e.g., flyers, postcards, brochures, business cards, letterhead).		
21.10	Incorporate clip art, images, borders, and other special effects into a layout.		
21.11	Select the appropriate color format and resolution for a variety of purposes (e.g., web, print).		
21.12	Understand and comply with the legalities of using preexisting images (e.g., copyright laws, trademarking).		
21.13	Create a professional portfolio to showcase projects.		
22.0	Demonstrate an understanding of color theory and its role in digital design – the student will be able to:		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
22.01 Describe the spectral colors in the visible light spectrum.		
22.02 Describe the difference between additive and subtractive color mixing.		
22.03 Compare and contrast RGB and CYMK color models as used in digital design.		
22.04 Define and explain the terminology related to color (e.g., chroma, lightness, saturation, hue, intensity, luminance/value, shade, tint).		
22.05 Demonstrate the application of color theory to design practices.		
23.0 Demonstrate an understanding of typography – the student will be able to:		
23.01 Define and describe the terminology related to character and line spacing (e.g., leading, kerning, tracking, baseline shift, ligature).		
23.02 Identify the characteristics and psychology of type, type families, type series, and type styles.		
23.03 Demonstrate an understanding of the history of typography.		
23.04 Describe the principles of typographic design as they relate to digital design.		
23.05 Compare and contrast the techniques of typographic communication relative to appropriateness and effectiveness.		
23.06 Demonstrate proficiency in incorporating typographic techniques into a communication design.		
23.07 Understand the installation and application of fonts.		
24.0 Demonstrate basic skill in digital photography – the student will be able to:		
24.01 Demonstrate the operation of a digital camera (typical features/modes).		
24.02 Demonstrate knowledge of ethics related to digital images/imaging; examine legal and content-related issues.		
24.03 Apply effective design principles in digital photography compositions (e.g., rule of thirds).		
24.04 Illustrate the essence of an event, quotation, or slogan through digital photography and/or digital imaging.		
25.0 Demonstrate skill in the use of digital imaging software applications – the student will be able to:		
25.01 Differentiate between raster (bitmap) and vector graphic images.		
25.02 Demonstrate basic knowledge of the tools and techniques for using vector software applications (e.g., Illustrator, Inkscape, CorelDRAW).		
25.03 Create and edit various illustrations using vector software (e.g., line art, drawing basics,		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
transforming/applying effects to objects, painting, type and type effects, layers).		
25.04 Demonstrate basic knowledge of the tools and techniques for using a raster-based software application (e.g., Photoshop, GNU Image Manipulation Program).		
25.05 Create and edit images/photographs using digital imaging software (e.g., layers, image editing, adjustments, filters, selections).		
25.06 Demonstrate skill in image manipulation, color correction, and special effects to creatively convey a message using vector-based or raster-based software applications.		
25.07 Demonstrate skill in scanning, cropping, and importing photographs.		
25.08 Compare and contrast image formats (e.g., BMP, EPS, GIF, JPEG, PDF, PNG, RAW, TIF).		
25.09 Demonstrate an understanding of image resolution and compression factors such as transmission speed, color reduction, and delivery media parameters.		
25.10 Incorporate scanned and digital photographs into documents comprising a specified design (e.g., poster, brochure, card, advertisement, web page).		
26.0 Develop an awareness of the emergent technologies associated with digital design – the student will be able to:		
26.01 Compare and contrast emerging technologies relative to their role in digital design (e.g., wireless, cloud-based, mobile, portable devices, kiosks).		
26.02 Describe social media as a form of digital design.		
26.03 Describe the emergent and evolving nature of software applications used in interactive design.		
26.04 Explain how the use of advanced image sensing devices have altered the manner in which communication takes place, especially those utilizing Quick Response (QR) Codes and other forms of two-dimensional bar coding techniques.		

Florida Department of Education
Student Performance Standards

Course Title: Digital Design 2
Course Number: 8209520
Course Credit: 1

Course Description:

This course continues the development of entry-level skills required for careers in digital design. The content includes computer skills; digital publishing operations; layout, design, and measurement activities; digital imaging; communication, collaboration and decision-making activities; critical thinking and problem solving.

Abbreviations:

FS-M/LA = Florida Standards for Math/Language Arts
NGSSS-Sci = Next Generation Sunshine State Standards for Science

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
17.0 Perform decision-making activities – the student will be able to:		
17.04 Demonstrate an understanding of various advertising channels.		
17.05 Recognize and maintain ethical standards.		
17.06 Demonstrate knowledge of copyright laws.		
19.0 Demonstrate proficiency in the safe and ethical use of the Internet to locate information – the student will be able to:		
19.10 Differentiate between viruses and malware, specifically the sources, ploys, and impact on personal privacy and computer operation; identify ways to avoid infection.		
19.11 Demonstrate an understanding of how to run an antivirus scan to remove viruses and malware.		
19.12 Describe the risks associated with social networking sites (e.g., Facebook, Instagram, and Twitter) and identify ways to mitigate these risks.		
19.13 Adhere to cyber safety practices with regard to conducting Internet searches, email, chat rooms, and other social network sites.		
19.14 Adhere to Acceptable Use policies when accessing the Internet.		
20.0 Demonstrate the ability to set project requirements, engage in project planning, and utilize the design process – the student will be able to:		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
20.07 Produce final designs based on specifications.		
27.0 Demonstrate proficiency in creating a simple website – the student will be able to:		
27.01 Create a webpage.		
27.02 Convert publications for viewing on the Internet.		
27.03 Save files in multiple formats.		
28.0 Demonstrate proficiency in digital publishing operations – the student will be able to:		
28.01 Produce a variety of color designs using different color techniques; include process color and spot color.		
28.02 Prepare output files using prepress operations (e.g., color separation, font management, file management).		
28.03 Read work orders and prepare electronic files that meet all specifications.		
28.04 Design a document using grids and formats.		
28.05 Produce documents integrating the Elements and Principles of Art and Design.		
29.0 Demonstrate proficiency in digital imaging and in utilizing digital photography – the student will be able to:		
29.01 Digitally crop and scale photographs.		
29.02 Demonstrate understanding of and proficiency in the use of formats and modes.		
29.03 Demonstrate the ability to use image editing software.		
29.04 Complete projects using appropriate resolution and screen values (e.g., DPI, LPI, PPI).		
29.05 Produce digitally retouched photographs; utilize tones, hues, and values.		
29.06 Produce projects using a digital camera.		
29.07 Scan multiple documents and images.		
29.08 Apply special effects to image files.		
30.0 Consolidate coursework into a professional portfolio – the student will be able to:		
30.01 Assess personal interests and create an individual career plan that reflects the transition from school to work, lifelong learning, and personal and professional goals.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
30.02 Prepare a traditional (hard copy) portfolio.		
30.03 Prepare a digital portfolio.		
30.04 Present the portfolio to an audience.		
31.0 Demonstrate the ability to create a multimedia presentation – the student will be able to:		
31.01 Create quality multimedia files; add audio, links, images/photos, and video.		
31.02 Incorporate audio and video into a presentation.		
32.0 Demonstrate promotion applications for a selected industry – the student will be able to:		
32.01 Identify the types of promotion used in the industry.		
32.02 Discuss the importance of advertising media.		
32.03 Use design principles to prepare promotional messages.		
32.04 Write a promotional message that appeals to a specified target market.		
32.05 Use advertising guidelines to design appropriate sample ads for print, television, and the Internet.		
33.0 Demonstrate proficiency in website design – the student will be able to:		
33.01 Develop awareness of acceptable website design.		
33.02 Access and digitize graphics through various resources (e.g., scanner, digital cameras, online graphics, clipart, CD-ROM).		
33.03 Use image design software to create and edit images.		
33.04 Demonstrate proficiency in adding downloadable forms to a website.		
34.0 Demonstrate proficiency in the use of web design software – the student will be able to:		
34.01 Compare and contrast various specialized web design programs.		
35.0 Demonstrate the ability to apply the design process – the student will be able to:		
35.01 Determine whether a digital design problem should be addressed or resolved.		
35.02 Identify the criteria and constraints associated with a digital design problem and select the most appropriate solution based on these factors.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
35.03 Evaluate the quality, efficiency, and productivity of an existing or proposed design; refine the design accordingly.		
35.04 Evaluate an existing design using conceptual, physical, and mathematical models; note aspects for improvement; determine whether the design meets criteria and constraints.		
36.0 Demonstrate the knowledge and skills relative to the design process – the student will be able to:		
36.01 Demonstrate the ability to represent a concept.		
36.02 Determine the most effective software applications for the digital design problem.		
36.03 Use communication, analysis, and design skills to define project specifications that meet the client’s needs/desires; include purpose, mood, and audience.		
36.04 Demonstrate increased proficiency in the use of tools and techniques in desktop/digital publishing software applications (e.g., layout, text, graphics, color and transparency, output).		
36.05 Use communication, analysis, and design skills to define project specifications that will meet the client’s expectations.		
37.0 Use computer network and web-based resources to facilitate collaborative communication – the student will be able to:		
37.01 Discuss the legal and ethical copyright issues related to downloading or sharing music and/or video files from online collaborative environments (e.g., GoogleDocs).		
37.02 Describe the risks associated with the use of social networking sites for collaboration; identify ways to mitigate those risks.		
37.03 Adhere to cyber safety practices while conducting Internet searches and using email, chat rooms, and social networking sites.		
37.04 Use various web-based tools associated with online collaboration; include those tools used to download and transfer files, telnet, FTP, PDF, plug-ins, and data compression.		
38.0 Compare and contrast various digital media delivery systems – the student will be able to:		
38.01 Explain the benefits and constraints of fixed versus streaming digital media.		
38.02 Describe the variations in design considerations between the mass display and on-demand display of digital media.		
38.03 Discuss the variations in design considerations related to digital signage.		
38.04 Describe the design implications of digital images and/or graphics based on projected mobile and Wi-Fi delivery media.		

Florida Department of Education
Student Performance Standards

Course Title: Digital Design 3
Course Number: 8209530
Course Credit: 1

Course Description:

This course continues the development of industry-standard skills required for careers in digital design. The content includes the use of software and equipment to perform digital publishing and digital imaging activities. Students continue to learn about communication, collaboration and decision-making activities, critical thinking and problem solving.

Abbreviations:

FS-M/LA = Florida Standards for Math/Language Arts
NGSSS-Sci = Next Generation Sunshine State Standards for Science

CTE Standards and Benchmarks		FS-M/LA	NGSSS-Sci
17.0	Perform decision-making activities – the student will be able to:		
17.07	Determine project specifications.		
17.08	Research a digital design problem and determine the most appropriate problem-solving method to enhance the functional, economic, and ethical viability of a project.		
17.09	Utilize a variety of approaches to solve digital design problems.		
20.0	Demonstrate the ability to set project requirements, engage in project planning, and utilize the design process – the student will be able to:		
20.08	Demonstrate knowledge of project management tasks and responsibilities.		
20.09	Evaluate solutions to ensure the sustainability and effectiveness of a digital design product (e.g., visual appeal, audience, media, market research).		
20.10	Identify basic usability, readability, and accessibility standards.		
27.0	Demonstrate proficiency in creating a simple website – the student will be able to:		
27.04	Create a simple website and use hyperlinks.		
27.05	Demonstrate knowledge of e-Portfolios and how to create an e-Portfolio.		
28.0	Demonstrate proficiency in digital publishing operations – the student will be able to:		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
28.06 Demonstrate proficiency in the use of a raster-based illustration program.		
28.07 Demonstrate proficiency in the use of a vector-based illustration program.		
28.08 Demonstrate the ability to save documents to various storage media/devices.		
29.0 Demonstrate proficiency in digital imaging and in utilizing digital photography – the student will be able to:		
29.09 Demonstrate increased proficiency in digital photography and digital image manipulation.		
30.0 Consolidate coursework into a professional portfolio – the student will be able to:		
30.05 Refine and implement a plan to facilitate personal growth and skill development related to career opportunities in digital design.		
30.06 Develop and maintain a professional portfolio; include a résumé and letter of interest.		
31.0 Demonstrate the ability to create a multimedia presentation – the student will be able to:		
31.03 Demonstrate the ability to create a multimedia PDF.		
31.04 Demonstrate proficiency in the use of 2D and 3D animation effects.		
32.0 Demonstrate promotion applications for a selected industry – the student will be able to:		
32.06 Design a website to promote a product or service.		
33.0 Demonstrate proficiency in website design – the student will be able to;		
33.05 Demonstrate proficiency in publishing to the Internet.		
34.0 Demonstrate proficiency in the use of web design software – the student will be able to:		
34.02 Demonstrate proficiency using web design software.		
35.0 Demonstrate the ability to apply the design process – the student will be able to:		
35.05 Select an appropriate brainstorming process (e.g., concept mapping, graphic organizers) and explain the role of brainstorming in the digital design process.		
35.06 Develop a digital design solution using the design process.		
35.07 Apply and evaluate the design process pertaining to a specific design solution.		
36.0 Demonstrate the knowledge and skills relative to the design process – the student will be able to:		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
36.06 Use the most effective designs to complete projects according to plan.		
36.07 Define, design, and complete digital design projects; account for time and resources.		
36.08 Update the professional digital design portfolio.		
36.09 Create a project plan to account for the time and resources to complete the project.		
36.10 Complete the project according to plan.		
37.0 Use computer network and web-based resources to facilitate collaborative communication – the student will be able to:		
37.05 Describe the ways interactive web applications support communication; include the real-time sharing of photos and video clips, messaging, chatting, and collaborating.		
37.06 Describe the appropriate use of social networking sites and applications, blogs, and collaborative tools for gathering and disseminating information and/or images.		
39.0 Demonstrate proficiency in digital photography – the student will be able to:		
39.01 Demonstrate proficiency in adjusting the hardware features (e.g., manual settings, shutter speed, f-stops) of a basic digital single-lens reflex camera (DSLR or digital SLR).		
39.02 Demonstrate knowledge of editing processes on smartphone devices; recognize the availability of apps related to photograph editing.		
39.03 Demonstrate understanding of white balance and ISO.		
39.04 Understand the role of lighting in photographic composition; develop an awareness of and use the three-point lighting concept.		
39.05 Use imaging techniques (e.g., High Dynamic Range, panoramic, long exposure, stop motion, time lapse) to achieve different artistic effects.		
39.06 Demonstrate the use of various photography techniques (e.g., black and white photography, macro photography).		
39.07 Demonstrate knowledge of photography by creating a variety of projects that include appropriate composition, framing, and point-of-view (POV).		
39.08 Demonstrate effective presentation of a thematic photograph or create a video portfolio of different types of photos.		
39.09 Develop an awareness of the history of photography.		
40.0 Plan, organize, and carry out collaborative digital design projects – the student will be able to:		
40.01 Apply the design process to determine the scope of a project.		
40.02 Organize a team according to individual strengths.		

CTE Standards and Benchmarks	FS-M/LA	NGSS-Sci
40.03 Assign specific tasks to team members.		
40.04 Determine project priorities and the timeline for completion.		
40.05 Identify the resources required for the project.		
40.06 Plan and conduct research, design, development, and evaluation activities for the project.		
40.07 Carry out the project plan to successful completion.		
40.08 Create a presentation to articulate the problem, the solution, the selected process, conclusions, and lessons learned (self-reflection).		

**Florida Department of Education
Student Performance Standards**

Course Title: Digital Design 4
Course Number: 8209540
Course Credit: 1

Course Description:

This course is designed to develop advanced industry-standard skills required for careers in digital design. The content includes the use of software and equipment, including digital video cameras and video/audio editing software.

Abbreviations:

FS-M/LA = Florida Standards for Math/Language Arts
 NGSSS-Sci = Next Generation Sunshine State Standards for Science

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
18.0 Demonstrate proficiency in digital imaging – the student will be able to:		
18.03 Produce projects using line art, grayscale, duotone, and the four-color process.		
18.04 Use illustrations to emphasize, interpret, and establish mood and emotion.		
24.0 Demonstrate basic skill in digital photography – the student will be able to:		
24.05 Demonstrate advanced knowledge of and skills in photography by creating various theme-based projects.		
28.0 Demonstrate proficiency in digital publishing operations – the student will be able to:		
28.09 Produce designs by integrating the elements and principles of design.		
28.10 Use software to produce vector illustrations.		
28.11 Produce multiple projects using a variety of software programs.		
28.12 Demonstrate the ability to prepare output files.		
28.13 Establish workflows using advanced features in desktop publishing software.		
30.0 Consolidate coursework into a professional portfolio – the student will be able to:		
30.07 Maintain a professional digital portfolio.		

CTE Standards and Benchmarks		FS-M/LA	NGSSS-Sci
31.0	Demonstrate the ability to create a multimedia presentation – the student will be able to:		
31.05	Create links in webpages, PDF files, and other documents.		
31.06	Optimize images for Internet publication.		
41.0	Demonstrate proficiency in creating and manipulating digital images using software applications – the student will be able to:		
41.01	Demonstrate proficiency using tools and techniques in raster-based software applications (e.g., layers, adjustments, filters, special effects, selections, masks, channels).		
41.02	Demonstrate proficiency using tools and techniques in vector-based software applications (e.g., line art, drawing, transforming/applying effects to objects, painting, type and type effects, layers).		
42.0	Demonstrate proficiency in the creation of digital design solutions involving motion or special effects – the student will be able to:		
42.01	Demonstrate an understanding of kinetic typography.		
42.02	Design a communication solution that employs animation or motion (e.g., graphics, text, video) to achieve or enhance the intended message.		
42.03	Describe the design constraints associated with optics and devices (e.g., tablet, kiosk, smartphone) used to deliver digital design products.		
42.04	Demonstrate proficiency in the use of editing software to create a product featuring special visual effects.		
42.05	Design and create an interactive digital design product featuring the use of rich media.		
43.0	Demonstrate knowledge and skills relative to digital design – the student will be able to:		
43.01	Demonstrate effective use of the Internet to locate and evaluate information.		
43.02	Distribute information digitally.		
43.03	Identify effective design methods for the digital presentation of information.		
43.04	Demonstrate the ability to select appropriate media topics, equipment, and materials for a digital media project.		
44.0	Demonstrate the ability to assess the impact of digital products – the student will be able to:		
44.01	Collect information and evaluate the quality and validity of this information.		
44.02	Evaluate data, analyze trends, and draw conclusions regarding the effects of technology on the individual, society, and the environment.		

CTE Standards and Benchmarks		FS-M/LA	NGSSS-Sci
45.0	Demonstrate an understanding of career opportunities and requirements in the field of digital design – the student will be able to:		
45.01	Discuss individual interests related to a career in digital design.		
45.02	Explore career opportunities in the field of digital design.		
45.03	Explore secondary and post-secondary educational opportunities related to digital design.		
45.04	Conduct a job search.		
45.05	Correctly complete a job application form.		
45.06	Demonstrate competence in job interview skills and techniques.		
45.07	Create a professional résumé and letter of introduction.		
45.08	Procure letters of recommendation; list awards and recognition received.		
46.0	Demonstrate an understanding of the use of emergent technologies in digital design and advertising – the student will be able to:		
46.01	Demonstrate an understanding of the principles of optics and how they relate to digital design.		
46.02	Discuss contemporary trends in digital signage and imprinted advertising specialties.		

Florida Department of Education
Student Performance Standards

Course Title: Digital Design 5
Course Number: 8209550
Course Credit: 1

Course Description:

This course continues the development of advanced industry-standard skills required for careers in digital design. The content includes the use of software and equipment to create multimedia presentations.

Abbreviations:

FS-M/LA = Florida Standards for Math/Language Arts
NGSSS-Sci = Next Generation Sunshine State Standards for Science

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
18.0 Demonstrate proficiency in digital imaging – the student will be able to:		
18.05 Apply special effects to projects.		
28.0 Demonstrate proficiency in digital publishing operations – the student will be able to:		
28.14 Create documents using advanced features in desktop publishing software.		
28.15 Produce color designs for a presentation using appropriate color balance.		
28.16 Create multimedia presentations.		
30.0 Consolidate coursework into a professional portfolio – the student will be able to:		
30.08 Present an updated digital portfolio to an audience.		
31.0 Demonstrate the ability to create a multimedia presentation – the student will be able to:		
31.07 Build pages for multimedia presentations.		
43.0 Demonstrate knowledge and skills relative to digital design – the student will be able to:		
43.05 Produce a digital media project.		
44.0 Demonstrate the ability to assess the impact of digital products – the student will be able to:		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
44.03 Use assessment techniques (e.g., trend analysis, experimentation) to make decisions about the future development of technology.		
45.0 Demonstrate an understanding of career opportunities and requirements in the field of digital design – the student will be able to:		
45.09 Organize work samples in a professional portfolio (digital and traditional formats).		
46.0 Demonstrate an understanding of the use of emergent technologies in digital design and advertising – the student will be able to:		
46.03 Explain the various technologies associated with digital design, advertising, and associated industries.		
46.04 Compare and contrast printing processes.		
47.0 Demonstrate proficiency in the creation of a digital design product using mobile communication devices – the student will be able to:		
47.01 Design and create digital design products suitable for delivery via multiple media options (e.g., smartphones, tablets, laptops).		
47.02 Discuss the design implications of products intended for delivery via Bluetooth-enabled devices.		
47.03 Compare and contrast the security and privacy issues associated with different delivery media, particularly in regard to social media.		
48.0 Demonstrate advanced project design capabilities associated with digital publishing – the student will be able to:		
48.01 Demonstrate advanced capabilities in the use of tools and techniques in digital publishing software applications (e.g., layout of a document, text, graphics, color/transparency, basic output).		
49.0 Demonstrate advanced ability to create and manipulate digital images using software applications – the student will be able to:		
49.01 Demonstrate advanced capabilities in the use of tools and techniques in raster-based software applications.		
49.02 Demonstrate advanced capabilities in the use of tools and techniques in vector-based software applications.		
50.0 Organize and carry out project plans for creating various digital design products – the student will be able to:		
50.01 Apply the design process to determine the goal, scope, criteria, constraints, and timeline of the project.		
50.02 Work as part of the project team; support the project’s focus, direction and progress.		
50.03 Identify the required resources for a specified project.		
50.04 Plan and conduct research, design, development, and evaluation activities for the successful completion of the project.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
50.05 Carry out the project plan to successful completion.		
50.06 Create a presentation to articulate the problem, the solution, the selected process, conclusions, and lessons learned (self-reflection).		

Florida Department of Education
Student Performance Standards

Course Title: Digital Design 6
Course Number: 8209560
Course Credit: 1

Course Description:

This course continues the development of industry-standard skills required for careers in digital design. The content includes the use of software and equipment to perform digital publishing and digital imaging activities.

Abbreviations:

FS-M/LA = Florida Standards for Math/Language Arts
NGSSS-Sci = Next Generation Sunshine State Standards for Science

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
30.0 Consolidate coursework into a professional portfolio – the student will be able to:		
30.09 Continue to update the professional digital portfolio.		
31.0 Demonstrate the ability to create a multimedia presentation – the student will be able to:		
31.16 Incorporate multimedia elements into digitally-delivered documents/products.		
31.17 Select appropriate fonts for on-screen presentations.		
51.0 Demonstrate understanding of the Elements and Principles of Art and Design – the student will be able to:		
51.01 Describe the Elements of Art and Design (line, shape, mass, value, space, texture, color, lighting).		
51.02 Describe the Principles of Art and Design (balance, unity, contrast, rhythm, proportion, emphasis, movement, scaling).		

Florida Department of Education
Student Performance Standards

Course Title: Digital Design 7
Course Number: 8209570
Course Credit: 1

Course Description:

This course is designed to develop advanced industry-standard skills required for careers in digital design. The content includes the use of software and equipment, including digital video cameras and audio/video editing software.

Abbreviations:

FS-M/LA = Florida Standards for Math/Language Arts
NGSSS-Sci = Next Generation Sunshine State Standards for Science

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
30.0 Consolidate coursework into a professional portfolio – the student will be able to:		
30.10 Refine and present the finalized digital portfolio to an audience.		
31.0 Demonstrate the ability to create a multimedia presentation – the student will be able to:		
31.10 Generate presentations with fully-integrated text and images.		
51.0 Demonstrate an understanding of the Elements and Principles of Art and Design – the student will be able to:		
51.03 Apply the Elements and Principles of Art and Design to enhance the message of the image/text and layout.		
51.04 Utilize design elements and principles to create cohesive digital design projects.		

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 occupational standards and benchmarks outlined in this secondary program correlate to the standards and benchmarks of the postsecondary program with the same Classification of Instructional Programs (CIP) number.

MyCareerShines is an interactive resource to assist students in identifying their ideal career and to enhance preparation for employment. Teachers are encouraged to integrate this resource into the program curriculum to meet the employability goals for each student.

Career and Technical Student Organization (CTSO)

SkillsUSA is the intercurricular career and technical student organization(s) 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.

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 Occupational Completion Point (OCP) or a Modified Occupational Completion Point (MOCP). 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 an OCP/MOCP. The student should work on different competencies and new applications of competencies each year toward completion of the OCP/MOCP. 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: Graphic Communications and Printing Technology
Program Type: Career Preparatory
Career Cluster: Arts, A/V Technology and Communication

Secondary – Career Preparatory

Program Number	8230100
CIP Number	0650040216
Grade Level	9-12
Standard Length	6 credits
Teacher Certification	Refer to the <u>Program Structure</u> section.
CTSO	SkillsUSA
SOC Codes (all applicable)	51-5112 – Printing Press Operators 51-5111 – Prepress Technicians and Workers 27-1024 – Graphic Designers

Purpose

The purpose of this program is to prepare students for initial employment in the Printing and Graphic Communications industry.

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 Arts, A/V Technology and Communication 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 Arts, A/V Technology and Communication career cluster.

The course content includes, but is not limited to, an understanding of the printing and graphic communications industry, digital production printing and prepress operations, contemporary and emergent printing technologies, and the application of finishing and distribution processes.

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 one program with three 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 secondary program structure:

OCP	Course Number	Course Title	Teacher Certification	Length	SOC Code	Level	Graduation Requirement
A	8230110	Introduction to Printing Technology	PRINTING @7 7G	1 credit	51-5112	2	
	8230120	Basic Offset Press Operations		1 credit		2	
	8230130	Basic Finishing and Bindery Operations		1 credit		2	
B	8230140	Digital Production Printing Operations		1 credit	51-5111	3	PA
C	8230150	Digital Imaging and Typography		1 credit	27-1024	3	
	8230160	Page Layout and Scanning Operations		1 credit		3	

(Graduation Requirement Abbreviations- EQ= Equally Rigorous Science, PA= Practical Arts, EC= Economics)

Florida Standards for Technical Subjects

Florida Standards (FS) for English Language Arts and Literacy in History/Social Studies, Science, and Technical Subjects are the critical reading and writing literacy standards designed for grade 6 and above. These standards are predicated on teachers of history/social studies, science, and technical subjects using their content area expertise to help students meet the particular challenges of reading, writing, speaking, listening, and language in their respective fields. The FS for Mathematical Practices are designed for grades K-12 and describe varieties of expertise that educators at all levels should seek to develop in their students. These practices rest on important “processes and proficiencies” with longstanding importance in mathematics education.

Instructors must incorporate the Florida Standards for Technical Subjects and Mathematical Practices throughout instruction of this CTE program.

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.

Common Career Technical Core – Career Ready Practices

Career Ready Practices describe the career-ready skills that educators should seek to develop in their students. These practices are not exclusive to a Career Pathway, program of study, discipline or level of education. Career Ready Practices should be taught and reinforced in all career exploration and preparation programs with increasingly higher levels of complexity and expectation as a student advances through a program of study.

1. Act as a responsible and contributing citizen and employee.
2. Apply appropriate academic and technical skills.
3. Attend to personal health and financial well-being.
4. Communicate clearly, effectively and with reason.
5. Consider the environmental, social and economic impacts of decisions.
6. Demonstrate creativity and innovation.
7. Employ valid and reliable research strategies.
8. Utilize critical thinking to make sense of problems and persevere in solving them.
9. Model integrity, ethical leadership and effective management.
10. Plan education and career path aligned to personal goals.
11. Use technology to enhance productivity.
12. Work productively in teams while using cultural/global competence.

Standards

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

- 01.0 Demonstrate understanding of safety and first aid practices.
- 02.0 Demonstrate understanding of graphic communications occupations and processes.
- 03.0 Demonstrate proficiency in art and copy preparation.
- 04.0 Demonstrate proficiency in prepress/imaging operations.
- 05.0 Demonstrate proficiency in image assembly/platemaking.
- 06.0 Demonstrate proficiency in performing basic offset press operations.
- 07.0 Demonstrate proficiency in basic finishing and bindery operations.
- 08.0 Demonstrate appropriate math skills.
- 09.0 Demonstrate proficiency in performing basic imposition platemaking and digital printer competencies.
- 10.0 Demonstrate proficiency in the operation of a digital production printing system.
- 11.0 Demonstrate proficiency in basic electronic imaging competencies.
- 12.0 Demonstrate proficiency in the use of type and typography.

**Florida Department of Education
Student Performance Standards**

Course Title: Introduction to Graphic Communications
Course Number: 8230110
Course Credit: 1

Course Description:

This course is designed to provide instruction in the different procedures and skills to perform, first aid, art and copy and pre-press operations.

Abbreviations:

FS-M/LA = Florida Standards for Math/Language Arts
 NGSSS-Sci = Next Generation Sunshine State Standards for Science

Note: This course is pending alignment in the following categories: FS-M/LA and NGSSS-Sci.

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
01.0 Demonstrate understanding of safety and first aid practices – the student will be able to:		
01.01 Identify the location of fire safety equipment.		
01.02 Describe the proper use of fire safety equipment.		
01.03 List safety rules involving flammable liquids.		
01.04 List the steps to be taken in case of injury in the lab.		
01.05 Identify locations of first aid kits and eye wash stations.		
01.06 Discuss the importance of the Material Safety Data Sheets (MSDS).		
01.07 Identify protective safety equipment (e.g., gloves, goggles, ear plugs).		
01.08 Practice proper safety procedures when operating equipment.		
01.09 Practice approved shop dress code for safe operation; include the necessary personal safety equipment.		
01.10 Pass a general lab safety test.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
01.11 Demonstrate acceptable employee health habits.		
01.12 Demonstrate knowledge of the “Right-to-Know” law.		
01.13 Pass a safety test related to the individual’s specialty area(s).		
01.14 Practice approved methods for the disposal of waste materials.		
01.15 Read, comprehend and follow instructions on warning labels.		
01.16 Demonstrate common sense when working with others.		
01.17 Demonstrate a working knowledge of the safety color code.		
02.0 Demonstrate understanding of graphic communications occupations and processes – the student will be able to:		
02.01 Define the role of graphics in a free enterprise system.		
02.02 Identify printing markets and types of printing businesses.		
02.03 List the rank of the printing industry among other industries.		
02.04 Identify the major printing processes.		
02.05 List the advantages of each major process.		
02.06 List the disadvantages of each major process.		
02.07 Identify the products produced by each major process.		
02.08 List the business flow of printing from initial need to final product.		
02.09 List the technical production flow from idea to finished product.		
02.10 Identify major occupations in the graphic arts.		
02.11 List the primary responsibilities for each occupation.		
02.12 Identify basic salary/wage expectation ranges for the local area.		
03.0 Demonstrate proficiency in art and copy preparation – the student will be able to:		
03.01 Demonstrate how to prepare thumbnail layouts.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
03.02 Demonstrate how to prepare rough layouts.		
03.03 Demonstrate how to prepare comprehensive layouts; include a finished working dummy.		
03.04 Employ the use of printer's measurements to compute inches, fractions, points, picas, decimals, percentages, and proportions.		
03.05 Check and compare the completed original to comprehensive layouts for final proofing.		
04.0 Demonstrate proficiency in prepress/imaging operations – the student will be able to:		
04.01 Identify basic equipment and tools and the safety rules pertaining to prepress/imaging operations.		
04.02 Demonstrate how to choose type using the correct size and format.		
04.03 Identify the fundamentals and uses of type.		
04.04 Identify the types of items that can be designed and produced using a page layout program.		
04.05 Demonstrate keyboarding skills.		
04.06 State how to organize a file management system for opening, copying, saving and deleting files.		
04.07 Demonstrate file management operations for opening, copying, saving and deleting files.		
04.08 Demonstrate how to log-on/boot-up and print from a page layout program; demonstrate a functional knowledge of computer commands/codes/menus/palettes for the software in use.		
04.09 Demonstrate how to set text with appropriate margins, formatting, gutters, leading, headings, etc.		
04.10 Demonstrate how to flow copy from a word processing program according to job specifications.		

**Florida Department of Education
Student Performance Standards**

Course Title: Basic Offset Press Operations
Course Number: 8230120
Course Credit: 1

Course Description:

This course is designed to provide instruction in performing reproduction photography and image assembly/plate making.

Abbreviations:

FS-M/LA = Florida Standards for Math/Language Arts
 NGSSS-Sci = Next Generation Sunshine State Standards for Science

Note: This course is pending alignment in the following categories: FS-M/LA and NGSSS-Sci.

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
05.0 Demonstrate proficiency in image assembly/platemaking – the student will be able to:		
05.01 Identify platemaking equipment and tools for offset metal plates.		
05.02 Identify plate material types and processing chemicals for making offset metal plates.		
05.03 Demonstrate how to produce a correctly exposed and processed metal plate for offset printing.		
05.04 Identify computer-to-plate platemaking equipment.		
06.0 Demonstrate proficiency in performing basic offset press operations – the student will be able to:		
06.01 Identify basic offset duplicator parts and operations.		
06.02 Identify basic safety and operation procedures for an offset duplicator or a single-color printing press.		
06.03 Demonstrate basic setup procedures for printing a single-color job.		
06.04 Produce a printed single-color job using an offset duplicator.		

**Florida Department of Education
Student Performance Standards**

Course Title: Basic Finishing and Bindery Operations
Course Number: 8230130
Course Credit: 1

Course Description:

This course is designed to provide instruction in the different procedures for finishing/binding operations and basic skills.

Abbreviations:

FS-M/LA = Florida Standards for Math/Language Arts
 NGSSS-Sci = Next Generation Sunshine State Standards for Science

Note: This course is pending alignment in the following categories: FS-M/LA and NGSSS-Sci.

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
07.0 Demonstrate proficiency in basic finishing and bindery operations – the student will be able to:		
07.01 Identify the operational and safety parts of a paper cutter.		
07.02 Identify the grain direction of paper.		
07.03 Demonstrate how to calculate basic paper cuts from a stock sheet.		
07.04 Demonstrate how to draw a master cutting diagram for making cuts.		
07.05 Demonstrate how to make accurate paper cuts using a mechanized paper cutter.		
07.06 Identify basic paper types, weights, grades and classifications used in the printing industry.		
07.07 Identify padding materials.		
07.08 Demonstrate how to produce correctly made pads of paper.		
07.09 Identify stapling and stitching equipment, materials and supplies.		
07.10 Demonstrate how to produce side-stitched, saddle-stitched, and stapled products.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
07.11 Identify punching/drilling equipment and hand tools.		
07.12 Demonstrate how to measure three-ring notebook pages for drilling.		
07.13 Demonstrate how to make holes for three-ring notebooks.		
07.14 Identify folding equipment and hand tools.		
07.15 Identify basic folds for printed products.		
07.16 Demonstrate how to make a single fold using an automatic folding machine.		
07.17 Identify collating equipment and hand tools.		
07.18 Demonstrate how to make sets of paper using collating equipment in the correct sequence.		
07.19 Demonstrate how to hand collate sets in proper sequence.		
07.20 Identify the cut products and the basic procedure for die cutting.		
07.21 Identify hot foil stamped products and the basic equipment, materials, and procedures for foil stamping.		
08.0 Demonstrate appropriate math skills – the student will be able to:		
08.01 Demonstrate how to solve addition, subtraction, multiplication and division of whole numbers.		
08.02 Demonstrate how to solve addition, subtraction, multiplication and division of fractions.		
08.03 Demonstrate how to solve addition, subtraction, multiplication and division of decimals.		
08.04 Demonstrate how to solve fraction to decimal and decimal to fraction conversion problems.		
08.05 Demonstrate how to solve decimal to percent and percent to decimal conversion problems.		
08.06 Demonstrate how to solve basic ratio and proportion problems.		
08.07 Demonstrate how to solve basic linear measurement problems.		
08.08 Demonstrate how to solve basic inches to picas and picas to inches conversion problems.		
08.09 Demonstrate how to solve inches to points and points to inches conversion problems.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
08.10 Demonstrate how to solve cost-calculating problems.		

**Florida Department of Education
Student Performance Standards**

Course Title: Digital Production Printing Operations
Course Number: 8230140
Course Credit: 1

Course Description:

This course is designed to provide instruction in the different procedures for performing basic film assembly and plate making.

Abbreviations:

FS-M/LA = Florida Standards for Math/Language Arts
 NGSSS-Sci = Next Generation Sunshine State Standards for Science

Note: This course is pending alignment in the following categories: FS-M/LA and NGSSS-Sci.

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
09.0 Demonstrate proficiency in performing basic imposition platemaking and digital printer competencies – the student will be able to:		
09.01 Read and comprehend production information on a job jacket/ticket.		
09.02 Demonstrate the ability to create a single-color layout for an envelope.		
09.03 Demonstrate the ability to create a single-color layout for a work-and-turn imposition.		
09.04 Demonstrate the ability to create a single-color layout for a work-and-tumble imposition.		
09.05 Demonstrate the ability to create a single-color layout for a business card.		
09.06 Demonstrate the ability to create a single-color layout for a 4-page sheetwise imposition.		
09.07 Demonstrate the ability to assemble a single-color layout for an 8-page signature.		
09.08 Demonstrate how to inspect and compare proofs to originals.		
09.09 Identify the equipment, tools, and materials used in platemaking operations and the parts, functions, and safety rules related to their operation.		

CTE Standards and Benchmarks	FS-M/LA	NGSS-Sci
09.10 Apply basic math skills to platemaking operations.		
09.11 Identify the different plate materials, types and processing chemicals and the methods of use for each.		
09.12 Demonstrate how to expose, process and preserve metal plates.		
09.13 Demonstrate how to make additions, deletions and repairs to metal plates.		
09.14 Demonstrate how to inspect and compare plates to proofs.		
09.15 Demonstrate how to properly handle, file, store and retrieve flats and plates.		
10.0 Demonstrate proficiency in the operation of a digital production printing system.		
10.01 Use the system interface to adjust image tone reproduction quality.		
10.02 Program and run a job for cardstock.		
10.03 Program and run a job for folded signatures.		
10.04 Program and set-up the various inline finishing and binding options.		
10.05 Program and run productivity features (e.g., cover sheets, job separator sheets).		
10.06 Program and run jobs on a digital color printing system.		
10.07 Evaluate and adjust color print quality on a digital color printing system.		
10.08 Apply troubleshooting and problem-solving strategies to digital printing systems.		
10.09 Demonstrate how to produce a 2-sided, 3-panel brochure.		
10.10 Demonstrate how to produce a 4-page newsletter on a digital printing system.		

**Florida Department of Education
Student Performance Standards**

Course Title: Digital Imaging and Typography
Course Number: 8230150
Course Credit: 1

Course Description:

This course is designed to provide instruction in the different procedures for performing basic film assembly and plate making.

Abbreviations:

FS-M/LA = Florida Standards for Math/Language Arts
 NGSSS-Sci = Next Generation Sunshine State Standards for Science

Note: This course is pending alignment in the following categories: FS-M/LA and NGSSS-Sci.

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
11.0 Demonstrate proficiency in basic electronic imaging competencies – the student will be able to:		
11.01 Read and comprehend production information on a job jacket/ticket.		
11.02 Identify the various types of items that can be designed and produced using desktop publishing.		
11.03 Identify the basic principles of design (e.g., unity, contrast, page proportions, balance).		
11.04 Demonstrate how to incorporate basic design principles in hand-drawn sketches and measured layouts.		
11.05 Identify line copy.		
11.06 Identify continuous tone and halftone copy.		
11.07 Identify basic process color principles and four kinds of color printing.		
11.08 Demonstrate understanding of electronic color-proofing techniques.		
11.09 Identify basic desktop publishing equipment.		
11.10 Define the limitations and capabilities of desktop publishing.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
11.11 Define the differences in quality of photo-processed output and laser printer output.		
11.12 Demonstrate understanding of postscript software capabilities.		
11.13 Define the operation of the hardware components of a computer aided publishing system.		
11.14 Demonstrate how to select appropriate software for word processing, graphics, scanning and page layout.		
11.15 Demonstrate a keyboard typing proficiency of a minimum of 30 WPM.		
11.16 State how to organize a file management system for opening, copying, saving and deleting files.		
11.17 Demonstrate file management operations for opening, copying, saving and deleting files.		
11.18 Demonstrate how to prepare a series of hand-drawn sketches for layouts incorporating appropriate marks (e.g., gutters, register marks, fold lines).		
11.19 Demonstrate how to prepare a dummy for a multi-page signature.		
11.20 Demonstrate an understanding of data exchange.		
12.0 Demonstrate proficiency in the use of type and typography – the student will be able to:		
12.01 Demonstrate how to measure copy/text in points and picas using a line gauge.		
12.02 Demonstrate how to measure type using a type-fitting gauge.		
12.03 Demonstrate how to identify x-height, meanline, baseline, ascenders, descenders, and the roles of each in measuring and designing with type.		
12.04 Demonstrate how to identify caps, lowercase, uppercase, small caps and ligatures.		
12.05 Define <i>dingbats</i> , <i>bullets</i> , <i>rules</i> , and <i>symbols</i> and the uses of each in publications.		
12.06 Demonstrate how to distinguish between display (headline) type and body (text) type by point size and style.		
12.07 Demonstrate how to identify basic type styles and the uses of each style.		
12.08 Determine the weight and posture of type.		
12.09 Demonstrate how to distinguish between <i>serif</i> and <i>sans-serif</i> type styles.		
12.10 Define <i>letter spacing</i> and <i>kerning</i> of type characters.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
12.11 Define <i>word spacing</i> and the relationship of <i>em</i> and <i>en</i> in paragraph spacing.		
12.12 Define <i>line spacing</i> and explain the measurement principles for the leading of text.		
12.13 Define type arrangements: <i>flush left, ragged right, flush right, ragged left, centered, justified, and forced justified</i> .		
12.14 Define and demonstrate <i>copy fitting</i> .		

**Florida Department of Education
Student Performance Standards**

Course Title: Page Layout and Scanning Operations
Course Number: 8230160
Course Credit: 1

Course Description:

This course is designed to provide instruction in electronic imaging, and typography.

Abbreviations:

FS-M/LA = Florida Standards for Math/Language Arts
 NGSSS-Sci = Next Generation Sunshine State Standards for Science

Note: This course is pending alignment in the following categories: FS-M/LA and NGSSS-Sci.

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
13.0 Demonstrate proficiency in using page layout operations – the student will be able to:		
13.01 Demonstrate how to prepare rough layouts.		
13.02 Demonstrate how to markup a copy for the production of a printed piece.		
13.03 Demonstrate how to select appropriate page layout software for a given job.		
13.04 Demonstrate how to log-on/boot-up and print out from a page layout program; demonstrate a functional knowledge of computer commands/codes/menus/palette for the software in use.		
13.05 Demonstrate text alignment, element positioning and the rules of page design for printed material.		
13.06 Demonstrate how to set-up column grids for an electronic page layout according to job specifications.		
13.07 Demonstrate how to set-up/select appropriate pagination for a given job.		
13.08 Demonstrate the uses of headers and footers.		
13.09 Demonstrate how to set text with appropriate margins, formatting, gutters, leading, headings, etc.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
13.10 Demonstrate a proficiency in conducting basic search operations.		
13.11 Demonstrate how to place copy from a word processing program into a page layout program according to job specifications.		
13.12 Demonstrate how to proofread, edit and make corrections/adjustments to copy on screen.		
13.13 Demonstrate how to download fonts.		
13.14 Demonstrate how to transfer graphics, rules, and dingbats from an existing file into a publication.		
13.15 Demonstrate the procedure for cropping graphics electronically.		
13.16 Use graphics and text to create a 2-sided, 3-panel brochure for publication.		
13.17 Demonstrate how to create a 4-page newsletter using windows, blocks, text, graphics, frames and headings.		
13.18 Demonstrate how to create a 2-page newsletter using drop caps for paragraph openings, wraparound (run-around) and graphics.		
13.19 Use tints, reverses, and manipulated type for effect to create a printed piece.		
13.20 Demonstrate how to produce a multicolor flyer using electronic spot color separations.		
13.21 Demonstrate knowledge of the capabilities, advantages, and disadvantages of available page layout programs.		
13.22 Demonstrate the use of an electronic dictionary, spell checker, and automatic hyphenation.		
14.0 Demonstrate proficiency in scanning operations – the student will be able to:		
14.01 Identify the hardware, basic components and operations associated with scanners.		
14.02 Identify basic scanner software and its uses and limitations.		
14.03 Demonstrate appropriate scanner/program operations for continuous tone copy.		
14.04 Demonstrate how to place scanned graphics/photos into existing page layout program.		

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 occupational standards and benchmarks outlined in this secondary program correlate to the standards and benchmarks of the postsecondary program with the same Classification of Instructional Programs (CIP) number.

MyCareerShines is an interactive resource to assist students in identifying their ideal career and to enhance preparation for employment. Teachers are encouraged to integrate this resource into the program curriculum to meet the employability goals for each student.

Career and Technical Student Organization (CTSO)

SkillsUSA is the intercultural career and technical student organization(s) 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.

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 Occupational Completion Point (OCP) or a Modified Occupational Completion Point (MOCP). 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 an OCP/MOCP. The student should work on different competencies and new applications of competencies each year toward completion of the OCP/MOCP. 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: Fabric Construction
Program Type: Non Career Preparatory
Career Cluster: Arts, A/V Technology and Communication

Secondary – Non Career Preparatory

Program Number	8500380
CIP Number	09200111PA
Grade Level	9-12
Standard Length	.5 credit
Teacher Certification	Refer to the <u>Program Structure</u> section.
CTSO	FCCLA

Purpose

The purpose of this program is to give students an opportunity to apply knowledge and skills related to the area of Arts, A/V Technology and Communication.

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 Arts, A/V Technology and Communication 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 Arts, A/V Technology and Communication career cluster.

This course is designed to prepare students to identify the characteristics of fibers, fabrics and textiles; to interpret consumer protection laws related to clothing, textiles, and home décor items; and to construct garments and/or home décor items.

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

Program Structure

This program is planned instruction consisting of one half-credit course.

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
8500380	Fabric Construction	FAM CON SC 1	0.5 credit	2	PA

(Graduation Requirement Abbreviations- EQ= Equally Rigorous Science, PA= Practical Arts, EC= Economics)

Academic Alignment Table

Academic alignment is an ongoing, collaborative effort of professional educators specializing in the fields of science, mathematics, English/language arts, and Career and Technical Education (CTE). This initiative supports CTE programs by improving student performance through the integration of academic content within CTE courses. Career and Technical Education courses that have been aligned to the Next Generation Sunshine State Standards for Science and the Florida Standards for Mathematics and English/Language Arts will show the following data: the quantity of academic standards in the CTE course; the total number of standards contained in the academic course; and the percentage of alignment to the CTE course.

Courses	Anatomy/ Physiology Honors	Astronomy Solar/Galactic Honors	Biology 1	Chemistry 1	Earth-Space Science	Environmental Science	Genetics	Integrated Science	Marine Science 1 Honors	Physical Science	Physics 1
8500380	1/87 1%	2/80 3%	23/83 28%	2/69 3%	20/67 30%	2/70 3%	1/69 1%	23/82 28%	2/66 3%	22/74 30%	2/72 3%

** Alignment pending review

Alignment attempted, but no correlation to academic course

Courses	Algebra 1	Algebra 2	Geometry	English 1	English 2	English 3	English 4
8500380	18/67 27%	9/75 12%	22/54 41%	**	**	**	**

** Alignment pending review

Alignment attempted, but no correlation to academic course

Florida Standards for Technical Subjects

Florida Standards (FS) for English Language Arts and Literacy in History/Social Studies, Science, and Technical Subjects are the critical reading and writing literacy standards designed for grade 6 and above. These standards are predicated on teachers of history/social studies, science, and technical subjects using their content area expertise to help students meet the particular challenges of reading, writing, speaking, listening, and language in their respective fields. The FS for Mathematical Practices are designed for grades K-12 and describe varieties of expertise that educators at all levels should seek to develop in their students. These practices rest on important “processes and proficiencies” with longstanding importance in mathematics education.

Instructors must incorporate the Florida Standards for Technical Subjects and Mathematical Practices throughout instruction of this CTE program.

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.

Common Career Technical Core – Career Ready Practices

Career Ready Practices describe the career-ready skills that educators should seek to develop in their students. These practices are not exclusive to a Career Pathway, program of study, discipline or level of education. Career Ready Practices should be taught and reinforced in all career exploration and preparation programs with increasingly higher levels of complexity and expectation as a student advances through a program of study.

1. Act as a responsible and contributing citizen and employee.
2. Apply appropriate academic and technical skills.
3. Attend to personal health and financial well-being.
4. Communicate clearly, effectively and with reason.
5. Consider the environmental, social and economic impacts of decisions.
6. Demonstrate creativity and innovation.
7. Employ valid and reliable research strategies.
8. Utilize critical thinking to make sense of problems and persevere in solving them.
9. Model integrity, ethical leadership and effective management.
10. Plan education and career path aligned to personal goals.
11. Use technology to enhance productivity.
12. Work productively in teams while using cultural/global competence.

Standards

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

- 01.0 Analyze characteristics, cost and care of fabric and fibers.
- 02.0 Demonstrate use of pattern envelope information and guide sheet instructions at the beginner level.
- 03.0 Demonstrate use of basic sewing equipment.
- 04.0 Demonstrate construction techniques at the beginner level.
- 05.0 Demonstrate use of reading and writing skills.

Florida Department of Education
Student Performance Standards

Course Title: Fabric Construction
Course Number: 8500380
Course Credit: .5 credit

Course Description:

This course is designed to prepare students to identify the characteristics of fibers, fabrics and textiles; to interpret consumer protection laws related to clothing, textiles, and home décor items; and to construct garments and/or home décor items.

Abbreviations:

FS-M/LA = Florida Standards for Math/Language Arts
NGSSS-Sci = Next Generation Sunshine State Standards for Science

Note: This course is pending alignment in the following categories: FS-LA.

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
01.0 Analyze characteristics, cost and care of fabric and fibers – the student will be able to:		
01.01 Identify the characteristics, use, and care of basic fibers and fabrics.		SC.912.N.1.1 SC.912.L.15.4
01.02 Identify methods of constructing fabrics.		
01.03 Explain the use and purpose of fabric finishes.		
01.04 Explain the differences between hangtags and required labeling.		SC.912.N.1.1
01.05 Identify consumer laws as related to clothing and textiles.		
01.06 Interpret the purposes of labeling to protect the consumer.		
02.0 Demonstrate use of pattern envelope information and guide sheet instructions at the beginner level – the student will be able to:		
02.01 Identify factors to consider when selecting patterns and garments.	MAFS.912.SRT.1.1	
02.02 Demonstrate use of a tape measure to take accurate measurements.		SC.912.N.1.1
02.03 Determine pattern size based on measurements.		SC.912.N.1.1

CTE Standards and Benchmarks	FS-M/LA	NGSS-Sci
02.04 Determine yardage and notions needed to complete a garment.	MAFS.912.N-Q.1.1, 2,3	SC.912.N.1.1
02.05 Complete pattern preparation.		SC.912.N.1.1
02.06 Correctly pin, mark, and cut pieces of the pattern.		SC.912.N.1.1
02.07 Identify and interpret symbols found on pattern pieces.		SC.912.N.1.1
02.08 Determine the order in which pieces are to be assembled.		SC.912.N.1.1
02.09 Read and comprehend guide sheet instructions.		
03.0 Demonstrate use of basic sewing equipment – the student will be able to:		
03.01 Identify and use small sewing equipment.		SC.912.N.1.1 SC.912.L.15.4
03.02 Identify parts of sewing machine, their function, safety and maintenance.		SC.912.N.1.1 SC.912.L.15.4
03.03 Read and understand instructions in a sewing machine manual.		
03.04 Demonstrate how to correctly thread the machine and bobbin.	MAFS.912.N-Q.1.1, 3	SC.912.P.12.3
03.05 Demonstrate proper stitching techniques.		
03.06 Identify and use correct pressing materials.		SC.912.L.18.12
03.07 Determine the uses of various presser feet and machine attachments.		
04.0 Demonstrate construction techniques at the beginner level – the student will be able to:		
04.01 Construct a machine stitched hem.		
04.02 Complete appropriate seam and edge finishes including serging.	MAFS.912.N-Q.1.1, 2,3	
04.03 Attach a button by hand using a needle and thread.	MAFS.912.A-REI.4.10	
04.04 Make a casing using elastic.		
04.05 Create a pillow using straight and curved seams.	MAFS.912.A-REI.4.10	SC.912.N.1.1
04.06 Construct a dart.	MAFS.912.G-CO.2.6,7 MAFS.912.G-CO.1.1,2,3,4,5	
04.07 Apply a facing to a garment.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
04.08 Complete a hem using a machine stitch and a hand stitch.	MAFS.912.G-CO.1.1	
04.09 Demonstrate the ability to interpret instructions from the guide sheet to create a simple garment.		
04.10 Complete a project to be donated to a local charity.		SC.912.N.1.1
04.11 Demonstrate mending techniques for existing garments.		
04.12 Recycle an old garment and create something new using basic sewing techniques.		SC.912.L.17.20
05.0 Demonstrate use of reading and writing skills – the student will be able to:		
05.01 Create a written description of the skills used in creating their garment.		SC.912.N.1.1
05.02 Create a label for care of the garment using writing skills.		SC.912.N.1.1
05.03 Design a fictional product line to include the following: company logo, description of fabrics used, types of garments sold and a persuasive essay on what makes these garments superior to others on the market.		SC.912.N.1.1

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

MyCareerShines is an interactive resource to assist students in identifying their ideal career and to enhance preparation for employment. Teachers are encouraged to integrate this resource into the program curriculum to meet the employability goals for each student.

Career and Technical Student Organization (CTSO)

Florida Family Career and Community Leaders of America (FCCLA) is the intercurricular career and technical student organization(s) 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.

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 Occupational Completion Point (OCP) or a Modified Occupational Completion Point (MOCP). 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 an OCP/MOCP. The student should work on different

competencies and new applications of competencies each year toward completion of the OCP/MOCP. 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: Fashion Technology and Design Services
Program Type: Career Preparatory
Career Cluster: Arts, A/V Technology and Communication

Secondary – Career Preparatory

Program Number	8506400
CIP Number	0419090606
Grade Level	9-12
Standard Length	4 credits
Teacher Certification	Refer to the <u>Program Structure</u> section.
CTSO	FCCLA
SOC Codes (all applicable)	41-2031 – Retail Salespersons 51-6052 – Tailors, Dressmakers, and Custom Sewers 51-6092 – Fabric and Apparel Patternmakers 27-1022 - Fashion Designers

Purpose

The purpose of this program is to prepare students for initial employment or continued study in the fashion technology and design services industry.

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and the relevant technical knowledge and skills needed to prepare for further education and careers in the Arts, A/V Technology and Communication 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 Arts, A/V Technology and Communication career cluster.

The content includes, but is not limited to, the following aspects of the fashion technology and design services 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 four 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 secondary program structure:

OCP	Course Number	Course Title	Teacher Certification	Length	SOC Code	Level	Graduation Requirement
A	8506405	Design Services Core	APPRL MFG ϕ 7 @7G	1 credit	41-2031	2	PA
B	8506410	Principles of Fashion Technology and Design Services	FAM CON SC 1 FASH TECH 7G	1 credit	51-6052	2	PA
C	8506420	Pattern Design Techniques	HME EC OCC ϕ 7 INT DES 7G	1 credit	51-6092	3	PA
D	8506430	Fashion Design Specialist	TAILORING ϕ 7 TEC ED 1 @2 ENG&TEC ED1@2	1 credit	27-1022	3	PA

(Graduation Requirement Abbreviations- EQ= Equally Rigorous Science, PA= Practical Arts, EC= Economics)

Academic Alignment Tables

Academic alignment is an ongoing, collaborative effort of professional educators specializing in the fields of science, mathematics, English/language arts, and Career and Technical Education (CTE). This initiative supports CTE programs by improving student performance through the integration of academic content within CTE courses. Career and Technical Education courses that have been aligned to the Next Generation Sunshine State Standards for Science and the Florida Standards for Mathematics and English/Language Arts will show the following data: the quantity of academic standards in the CTE course; the total number of standards contained in the academic course; and the percentage of alignment to the CTE course.

Courses	Anatomy/ Physiology Honors	Astronomy Solar/Galactic Honors	Biology 1	Chemistry 1	Earth- Space Science	Environmental Science	Genetics	Integrated Science	Marine Science 1 Honors	Physical Science	Physics 1
8506405	4/87 5%	7/80 9%	30/83 36%	6/69 9%	28/67 42%	3/70 4%	5/69 7%	31/82 38%	6/66 9%	30/74 41%	6/72 8%
8506410	8/87 9%	9/80 11%	25/83 30%	10/69 14%	21/67 31%	9/70 13%	10/69 14%	24/82 29%	10/66 15%	22/74 30%	8/72 11%
8506420	22/87 25%	24/80 30%	10/83 12%	25/69 36%	10/67 15%	22/70 31%	23/69 33%	11/82 13%	19/66 29%	10/74 14%	23/72 32%
8506430	21/87 24%	23/80 29%	4/83 5%	24/69 35%	4/67 6%	19/70 27%	21/69 30%	5/82 6%	17/66 26%	5/74 7%	22/72 31%

** Alignment pending review

Alignment attempted, but no correlation to academic course

Courses	Algebra 1	Algebra 2	Geometry	English 1	English 2	English 3	English 4
8506405	27/67 40%	13/75 17%	35/54 65%	18/46 39%	18/45 40%	#	#
8506410	21/67 31%	10/75 13%	33/54 61%	18/46 39%	18/45 40%	#	#
8506420	11/67 16%	18/75 24%	20/54 37%	#	#	16/45 36%	16/45 36%
8506430	11/67 16%	16/75 21%	23/54 43%	#	#	5/45 11%	5/45 11%

** Alignment pending review

Alignment attempted, but no correlation to academic course

Florida Standards for Technical Subjects

Florida Standards (FS) for English Language Arts and Literacy in History/Social Studies, Science, and Technical Subjects are the critical reading and writing literacy standards designed for grade 6 and above. These standards are predicated on teachers of history/social studies, science, and technical subjects using their content area expertise to help students meet the particular challenges of reading, writing, speaking, listening, and language in their respective fields. The FS for Mathematical Practices are designed for grades K-12 and describe varieties of expertise that educators at all levels should seek to develop in their students. These practices rest on important “processes and proficiencies” with longstanding importance in mathematics education.

Instructors must incorporate the Florida Standards for Technical Subjects and Mathematical Practices throughout instruction of this CTE program.

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.

Common Career Technical Core – Career Ready Practices

Career Ready Practices describe the career-ready skills that educators should seek to develop in their students. These practices are not exclusive to a Career Pathway, program of study, discipline or level of education. Career Ready Practices should be taught and reinforced in all career exploration and preparation programs with increasingly higher levels of complexity and expectation as a student advances through a program of study.

1. Act as a responsible and contributing citizen and employee.
2. Apply appropriate academic and technical skills.
3. Attend to personal health and financial well-being.
4. Communicate clearly, effectively and with reason.
5. Consider the environmental, social and economic impacts of decisions.
6. Demonstrate creativity and innovation.
7. Employ valid and reliable research strategies.
8. Utilize critical thinking to make sense of problems and persevere in solving them.
9. Model integrity, ethical leadership and effective management.
10. Plan education and career path aligned to personal goals.
11. Use technology to enhance productivity.
12. Work productively in teams while using cultural/global competence.

Standards

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

- 01.0 Demonstrate leadership and organizational skills.
- 02.0 Demonstrate appropriate basic skills essential to working in design occupations.
- 03.0 Identify and exhibit employment skills.
- 04.0 Describe the relationship between human factors and design services.
- 05.0 Identify the characteristics and care of textiles.
- 06.0 Select and safely use tools and equipment.
- 07.0 Operate and maintain a conventional and/or commercial/industrial sewing machine.
- 08.0 Operate specialty machines (minimum of two machines, if available).
- 09.0 Select and prepare materials.
- 10.0 Construct a machine-sewn design project for inclusion in a design portfolio.
- 11.0 Develop a design portfolio.
- 12.0 Identify employment opportunities in Fashion Technology and Design Services.
- 13.0 Identify and exhibit employment skills for occupations related to Fashion Technology and Design Services.
- 14.0 Demonstrate an understanding of the elements and principles of design.
- 15.0 Demonstrate an understanding of the terminology used in the apparel industry.
- 16.0 Operate specialty machines (if available).
- 17.0 Demonstrate skill in the construction of simple garments.
- 18.0 Demonstrate an understanding of the ways eco-fashion decisions impact the environment, consumer health and the working conditions of people in the fashion industry.
- 19.0 Research the ways fashion design is affected by history and culture.
- 20.0 Demonstrate sketching and freehand drawing skills.
- 21.0 Demonstrate an understanding of the uses of technology in the fashion industry.
- 22.0 Identify the psychological and practical needs of clothing for special markets.
- 23.0 Create an original pattern for a garment.
- 24.0 Demonstrate alteration skills on a sample or garment.
- 25.0 Demonstrate clothing repair on a garment or sample.
- 26.0 Identify and describe the different specialties related to Fashion Technology and Design Services (e.g., Window Display, Fashion Design Assistant, Tailor's Assistant, Personal Shopper, and Stylist).
- 27.0 Select one specialty area and complete the student performance standards for that area.
- 28.0 (Optional) Schedule and participate in a Fashion Technology and Design Services job shadowing experience.
- 29.0 Finalize a professional portfolio according to industry standards.

Florida Department of Education
Student Performance Standards

Course Title: Design Services Core
Course Number: 8506405
Course Credit: 1

Course Description:

This course is designed to develop competencies in areas of the interior design industry or fashion technology and design industry. This course includes essential basic skills for working in Interior Design Services, leadership and organizational skills, basic principles of design, textile characteristics and care, employability skills, relationship between human factors and interior design, the safe use of tools and equipment, and the selection of appropriate materials.

Abbreviations:

FS-M/LA = Florida Standards for Math/Language Arts
NGSSS-Sci = Next Generation Sunshine State Standards for Science

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
01.0 Demonstrate leadership and organizational skills – the student will be able to:		
01.01 Identify professional and youth organizations.	LAFS.910.SL.1.1,2,3 LAFS.910.SL.2.4,5,6 LAFS.910.L.1.1,2 LAFS.910.RI.4.10 LAFS.910.W.3.7,8	
01.02 Identify the purposes and functions of professional and youth organizations.	LAFS.910.SL.1.1,2,3 LAFS.910.SL.2.4,5,6 LAFS.910.L.1.1,2 LAFS.910.W.4.10 LAFS.910.W.3.7,8	
01.03 Identify the roles and responsibilities of members.	LAFS.910.SL.1.1,2,3 LAFS.910.SL.2.4,5,6 LAFS.910.L.1.1,2 LAFS.910.W.4.10 LAFS.910.W.3.7,8	
01.04 Demonstrate cooperation as a group member to achieve organizational goals.	LAFS.910.SL.1.1,2,3 LAFS.910.SL.2.4,5,6 LAFS.910.L.1.1,2 LAFS.910.W.4.10 LAFS.910.W.3.7,8	

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
01.05 Demonstrate confidence in leadership roles and organizational responsibilities.	LAFS.910.SL.1.1,2,3 LAFS.910.SL.2.4,5,6 LAFS.910.L.1.1,2 LAFS.910.W.4.10 LAFS.910.W.3.7,8	
02.0 Demonstrate appropriate basic skills essential to working in design services occupations – the student will be able to:		
02.01 Identify the knowledge, skills, and attitudes necessary to perform occupational tasks (e.g., email, phone, conversations with clients).	LAFS.910.SL.2.4 LAFS.910.L.3.6	
02.02 Demonstrate the communication competencies required to perform occupational tasks.	LAFS.910.SL.2.4 LAFS.910.L.3.6	
03.0 Identify and exhibit employment skills – the student will be able to:		
03.01 Use the Internet to conduct a job search.	LAFS.910.SL.1.1,2,3 LAFS.910.SL.2.4,5,6 LAFS.910.L.1.1,2 LAFS.910.RI.4.10 LAFS.910.W.4.10 LAFS.910.W.3.7,8,9	
03.02 Research and synthesize information about an industry-related employment opportunity or advanced training opportunities; include information pertaining to local post-secondary educational programs and training opportunities.	LAFS.910.SL.1.1,2,3 LAFS.910.SL.2.4,5,6 LAFS.910.L.1.1,2 LAFS.910.RI.4.10 LAFS.910.W.4.10 LAFS.910.W.3.7,8,9 MAFS.912.A.REI.1.1, MAFS.912.A.REI.2.3 MAFS.912.F.IF.3.9 MAFS.912.S.ID.1.1	
03.03 Demonstrate proficiency in current technology and software related to the fashion design industry; create, revise, retrieve and verify information.	LAFS.910.SL.1.1,2,3 LAFS.910.SL.2.4,5,6 LAFS.910.L.1.1,2 LAFS.910.RI.4.10 LAFS.910.W.4.10 LAFS.910.W.3.7,8,9	
03.04 Apply the principles of time management, work simplification, and teamwork when performing assigned tasks.		
03.05 Demonstrate pride in the quality of work performed.		
04.0 Describe the relationship between human factors and design services – the student will be able to:		
04.01 Define the <i>elements</i> of design applicable to interior design (space, line, shape, form, texture, color).	LAFS.910.L.3.6 LAFS.910.W.3.7,8,9	SC.912.P.10.19 SC.912.P.8.2

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
	LAFS.910.W.4.10 LAFS.910.W.2.4,5,6 MAFS.912.G-CO.1.1 MAFS.912.G-MG.1.1	SC.912.N.1.1
04.02 Define the <i>principles</i> of design applicable to design (proportion, scale, balance, emphasis, rhythm, harmony).	LAFS.910.W.3.7,8,9 LAFS.910.W.4.10 LAFS.910.W.2.4,5,6 MAFS.912.G-SRT.1.1 MAFS.912.G-SRT.2.5 MAFS.912.G-CO.2.6	
04.03 Explain the impact of human factors (psychological, physiological, social) on decisions relating to design services processes.	LAFS.910.SL.1.3 LAFS.910.W.4.10	SC.912.L.17.20
04.04 Identify and describe the modifications necessary to accommodate individuals with special needs.	LAFS.910.L.3.6 MAFS.912.G-CO.1.1,2,3,4,5	SC.912.N.1.1
04.05 Identify and describe the impact of human needs and wants on the cost of design services and customized projects.	LAFS.910.L.3.6 MAFS.912.N-Q.1.1,2,3	
04.06 Identify and describe the importance of barrier-free design and accessibility related to design services.	LAFS.910.L.3.6	
04.07 Identify and describe the characteristics of interior spaces, furnishings, and garments.	LAFS.910.L.3.6 MAFS.912.G-MG.1.1,3 MAFS.912.G-GMD.1.1 MAFS.912.G-GMD.2.4 MAFS.912.G-SRT.1.1,2 MAFS.912.G-SRT.3.6	SC.912.N.1.1
04.08 Take accurate measurements to determine the correct size home furnishings items.	LAFS.910.L.3.6 MAFS.912.G-CO.1.1,2,3,4,5	SC.912.N.1.1
05.0 Identify the characteristics and care of textiles – the student will be able to:		
05.01 Identify and describe fiber characteristics.		SC.912.N.1.1 SC.912.L.15.4
05.02 Identify and describe types of fabric construction (e.g., knitted, woven, tufted).	LAFS.910.L.3.6 LAFS.910.RI.4.10 LAFS.910.SL.1.1 LAFS.910.W.4.10	SC.912.N.1.1 SC.912.L.15.4
05.03 Identify and describe types of fabric finishes (e.g., dyed, printed, performance/quality enhancements).	LAFS.910.L.3.6 LAFS.910.RI.4.10 LAFS.910.SL.1.1 LAFS.910.W.4.10 MAFS.912.G-CO.1.1	SC.912.N.1.1 SC.912.L.15.4
05.04 Identify and describe different types of natural and manufactured textiles; identify the pros/cons, uses, and care of each type.	LAFS.910.L.3.6 LAFS.910.RI.4.10	SC.912.N.1.1 SC.912.L.15.4

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
	LAFS.910.SL.1.1 LAFS.910.W.4.10	
05.05 Identify the laws and regulations governing the textile industry; include labeling laws and care symbols.	LAFS.910.L.3.6 LAFS.910.RI.4.10 LAFS.910.SL.1.1 LAFS.910.W.4.10	SC.912.N.1.1 SC.912.L.15.4
06.0 Select and safely use tools and equipment – the student will be able to:	LAFS.910.L.3.6 LAFS.910.RI.4.10 LAFS.910.SL.1.1 LAFS.910.W.4.10	
06.01 Identify the tools and equipment used in design services for sewing, cutting, measuring, fabric marking, and drafting.		SC.912.N.1.1
06.02 Select the appropriate tools and equipment for assigned projects; explain why the selection is appropriate for the project.	LAFS.910.L.3.6	SC.912.N.1.1
06.03 Demonstrate proper and safe usage of tools and equipment.		SC.912.N.1.1
06.04 Identify and demonstrate safety procedures for the use of conventional sewing machines and home sergers, and pressing equipment.	LAFS.910.SL1.1	
06.05 Explain the importance of observing Occupational Safety and Health Administration (OSHA) rules and regulations.	LAFS.910.SL1.1	SC.L.18.12
06.06 Clean and maintain various types of tools and equipment.	LAFS.910.SL1.1	
06.07 Keep an inventory record of tools, equipment, supplies, and materials using computer application software or other formatting options (e.g., written records).	LAFS.910.SL1.1	
06.08 Research innovations in materials and technologies that contribute to safeguards in the tools and equipment used in interior design services.	LAFS.910.SL1.1 LAFS.910.W.4.10	
06.09 Identify and apply drafting tools and techniques to a specific design services project (e.g., architectural ruler, light box, protractor, floor plans to scale, one-point perspective).		SC.912.L.15.4
07.0 Operate and maintain a conventional and/or commercial/industrial sewing machine – the student will be able to:	LAFS.910.SL1.1 LAFS.910.RI.4.10 LAFS.910.W.4.10	
07.01 Identify the parts of a sewing machine.		SC.912.P.10.18
07.02 Select the needles that appropriate for different fabric types; identify the process and demonstrate needle insertion.	LAFS.910.RI.4.10 LAFS.910.W.3.7,8,9	
07.03 Identify the steps and demonstrate threading a sewing machine.	LAFS.910.L.3.6 MAFS.912.G-MG.1.1	
07.04 Diagram and demonstrate the ability to wind the bobbin, thread the bobbin case, and insert the bobbin correctly into a sewing machine.		SC.912.P.12.3
07.05 Demonstrate straight stitching.	LAFS.910.L.3.6 LAFS.910.RL.1.1	

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
	LAFS.910.RI.4.10	
07.06 Identify and demonstrate stitch length and width selection.	LAFS.910.L.3.6 LAFS.910.RL.1.1 LAFS.910.RI.4.10 MAFS.912.G-MG.1.2,3	
07.07 Demonstrate utility and decorative stitches.	LAFS.910.L.3.6 LAFS.910.RL.1.1 LAFS.910.RI.4.10	
07.08 Identify the tension and demonstrate tension adjustment.	LAFS.910.L.3.6 LAFS.910.RL.1.1 LAFS.910.RI.4.10 MAFS.912.G-MG.1.2,3	SC.912.P.12.3
07.09 Demonstrate cleaning and lubricating the machine following manufacturer's instructions.	LAFS.910.L.3.6 LAFS.910.RL.1.1 LAFS.910.RI.4.10	SC.912.N.1.1
08.0 Operate specialty machines (minimum of two machines, if available) – the student will be able to identify and operate at least two of the following machines:	LAFS.910.L.3.6 LAFS.910.RL.1.1 LAFS.910.RI.4.10 MAFS.912.N-Q.1.1 MAFS.912.A.SSE.1.1 MAFS.912.F.LE.2.5	
08.01 Electronic programmable machine.	LAFS.910.L.3.6 LAFS.910.RL.1.1 LAFS.910.RI.4.10 MAFS.912.F.LE.2.5	SC.912.N.1.1
08.02 Serger.	LAFS.910.L.3.6 LAFS.910.RL.1.1 LAFS.910.RI.4.10	SC.912.N.1.1
08.03 Pleater, ruffler foot, or gathering foot.	LAFS.910.L.3.6 LAFS.910.RL.1.1 LAFS.910.RI.4.10	SC.912.N.1.1
08.04 Blindstitch machine or blind hemming foot.		SC.912.N.1.1
08.05 Straight stitch machine.	LAFS.910.L.3.6 LAFS.910.RL.1.1 LAFS.910.RI.4.10	SC.912.N.1.1
08.06 Chain stitch machine or five thread serger.	LAFS.910.L.3.6 LAFS.910.RL.1.1 LAFS.910.RI.4.10	SC.912.N.1.1
08.07 Cutting machine or electric cutting system.	LAFS.910.L.3.6 LAFS.910.RL.1.1 LAFS.910.RI.4.10	SC.912.N.1.1

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
08.08 Bar tack or programmable/computerized sewing machine.	LAFS.910.L.3.6 LAFS.910.RL.1.1 LAFS.910.RI.4.10	SC.912.N.1.1
08.09 Zigzag machine.	LAFS.910.L.3.6 LAFS.910.RL.1.1 LAFS.910.RI.4.10	SC.912.N.1.1
09.0 Select and prepare materials – the student will be able to:	LAFS.910.L.3.6 LAFS.910.RL.1.1 LAFS.910.RI.4.10	
09.01 Identify and match pattern pieces.	LAFS.910.L.3.6 LAFS.910.RL.1.1 LAFS.910.RI.4.10	
09.02 Read and interpret instructions and specifications.	LAFS.910.L.3.6 LAFS.910.RL.1.1 LAFS.910.RI.4.10	
09.03 Identify fabric content.	LAFS.910.L.3.6 LAFS.910.RL.1.1 LAFS.910.RI.4.10	SC.912.N.1.1 SC.912.L.15.4
09.04 Prepare fabric.		
09.05 Adjust patterns according to pattern/teacher instructions.	LAFS.910.L.3.6 LAFS.910.RL.1.1 LAFS.910.RI.4.10 MAFS.912.G-CO.1.5 MAFS.912.G-CO.2.6,7,8	
09.06 Lay out, pin, cut, and mark fabric according to a pattern or teacher instructions.	LAFS.910.L.3.6 LAFS.910.RL.1.1 LAFS.910.RI.4.10	
09.07 Demonstrate stay stitching and ease stitching.	LAFS.910.L.3.6 LAFS.910.RL.1.1 LAFS.910.RI.4.10	
09.08 Match grain lines and patterns according to a pattern or teacher instructions.	LAFS.910.L.3.6 MAFS.912.G-CO.1.1	
09.09 Mark fabric for assembly according to a pattern or teacher instructions.	LAFS.910.RI.4.10 LAFS.910.L.3.6 MAFS.912.G-CO.1.1,2,3, 4,5	SC.912.L.18.12 SC.912.P.8.2
09.10 Mark fabric for trims according to a pattern or teacher instructions.	LAFS.910.RI.4.10 LAFS.910.L.3.6 MAFS.912.G-CO.1.1,2,3, 4,5	SC.912.L.18.12 SC.912.P.8.2
09.11 Match thread with fabric.	LAFS.910.L.3.6	

CTE Standards and Benchmarks	FS-M/LA	NGSS-Sci
09.12 Identify, select, and use content labels according to fabric requirements.	LAFS.910.RI.4.10 LAFS.910.L.3.6 MAFS.912.G-CO.1.1,2,3,4,5 MAFS.912.G-CO.1.4	
10.0 Construct a machine-sewn design project for inclusion in a design portfolio – the student will be able to:	LAFS.910.RI.4.10 LAFS.910.L.3.6 MAFS.912.G-CO.1.1,2,3,4,5	
10.01 Construct projects that include seaming, darts, interfacing, seam finishing, hemming, closures and pockets.	LAFS.910.RI.4.10 LAFS.910.L.3.6	
10.02 Line up notches, dots, or clips according to a pattern or teacher instructions.	LAFS.910.RI.4.10 LAFS.910.L.3.6	
10.03 Stitch on woven, stretch, or specialty fabrics using the appropriate stitch length.	LAFS.910.L.3.6	
10.04 Demonstrate correct pressing techniques by following fabric requirements.	LAFS.910.RI.4.10 LAFS.910.L.3.6	SC.912.L.18.12 SC.912.P.8.2
10.05 Demonstrate machine hemming according to machine manual instructions.		
11.0 Develop a design portfolio – the student will be able to:	LAFS.910.RI.4.10 LAFS.910.L.3.6 MAFS.912.G-CO.1.1,2,3,4,5	
11.01 Assemble a portfolio; include all work samples.	LAFS.910.RI.4.10 LAFS.910.L.3.6	
11.02 Assemble a Technical Sewing Samples binder.		
11.03 Construct basic hand-stitching techniques (e.g., running, backstitch, overcast, blanket).	LAFS.910.RI.4.10 LAFS.910.L.3.6	
11.04 Demonstrate stay stitching and ease stitching.	LAFS.910.RI.4.10 LAFS.910.L.3.6	
11.05 Demonstrate straight seams, clean finish and other seam finishes; include common seam allowances (e.g., 1/4", 5/8").	LAFS.910.RI.4.10 LAFS.910.L.3.6	
11.06 Demonstrate hemming techniques (e.g., slip stitch, blind hem stitch).		

Florida Department of Education
Student Performance Standards

Course Title: Principles of Fashion Technology and Design Services
Course Number: 8506410
Course Credit: 1

Course Description:

This course is designed to further develop competencies in the area of Fashion Technology and Design Services. This course includes employment opportunities in fashion technology and design services, the basic skills essential to working in this industry, employability skills, the elements and principles of design, the terminology of the fashion industry, garment construction skills, sales techniques, and entrepreneurship.

Abbreviations:

FS-M/LA = Florida Standards for Math/Language Arts
 NGSSS-Sci = Next Generation Sunshine State Standards for Science

CTE Standards and Benchmarks		FS-M/LA	NGSSS-Sci
12.0	Identify employment opportunities in Fashion Technology and Design Services – the student will be able to:		
12.01	Secure information about a job and advanced training opportunities for the job; report in a written or oral format.	LAFS.910.SL.1.1,2,3 LAFS.910.SL.2.4,5,6 LAFS.910.L.1.1,2 LAFS.910.RI.4.10 LAFS.910.W.4.10 LAFS.910.W.3.7,8,9 MAFS.912.A.REI.1.1 MAFS.912.A.REI.2.3 MAFS.912.F.IF.3.7 MAFS.912.S.ID.1.1	
12.02	Demonstrate proficiency in current technology and software related to the fashion design industry; create, revise, retrieve and verify information.	LAFS.910.SL.1.1,2,3 LAFS.910.SL.2.4,5,6 LAFS.910.L.1.1,2 LAFS.910.RI.4.10 LAFS.910.W.4.10 LAFS.910.W.3.7,8,9	
12.03	Apply the principles of time management, work simplification, and teamwork when performing assigned tasks.	LAFS.910.SL.1.1	
12.04	Demonstrate pride in the quality of work performed.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
12.05 Identify career options in Fashion Technology and Design Services (e.g., entrepreneurship).	LAFS.910.SL.1.1,2,3 LAFS.910.SL.2.4,5,6 LAFS.910.L.1.1,2 LAFS.910.RI.4.10 LAFS.910.W.4.10 LAFS.910.W.3.7,8,9	
12.06 Create a presentation on non-traditional career paths (e.g., costume design, theater, entertainment, buyers, fabric store owners) in the garment/textile industry.	LAFS.910.SL.1.1,2,3 LAFS.910.SL.2.4,5,6 LAFS.910.L.1.1,2 LAFS.910.RI.4.10 LAFS.910.W.4.10 LAFS.910.W.3.7,8,9	
12.07 Analyze current trends as they affect the future of occupations in Fashion Technology and Design Services.	LAFS.910.SL.1.1,2,3 LAFS.910.SL.2.4,5,6 LAFS.910.L.1.1,2 LAFS.910.RI.4.10 LAFS.910.W.4.10 LAFS.910.W.3.7,8,9	
12.08 Identify different earning and wage level options for occupations in Fashion Technology and Design Services.	MAFS.912.A.REI.1.1 MAFS.912.A.REI.2.3 MAFS.912.F.IF.3.2 MAFS.912.S.ID.1.1	
13.0 Identify and exhibit employment skills for occupations related to Fashion Technology and Design Services – the student will be able to:		
13.01 Identify and list documents that may be required to apply for a job.	LAFS.910.L.3.6 LAFS.910.W.2.4	
13.02 Complete a job application form accurately.	LAFS.910.L.3.6 LAFS.910.W.2.4	
13.03 Demonstrate competence in job interview techniques; use role playing techniques.	LAFS.910.SL.2.6	
13.04 Identify and demonstrate appropriate responses to criticism from an employer, supervisor, co-worker, or customer.		
13.05 Identify and demonstrate acceptable work habits.		
13.06 Demonstrate knowledge of how to make job changes appropriately.	LAFS.910.L.3.6 LAFS.910.W.2.4	
13.07 Identify and describe acceptable employee health and hygiene habits.	LAFS.910.L.3.6 LAFS.910.W.2.4	
13.08 Demonstrate customer relations skills by synthesizing given instructions.	LAFS.910.L.3.6 LAFS.910.W.2.4	
13.09 Develop and create a résumé and portfolio.	LAFS.910.L.3.6 LAFS.910.W.2.4	
13.10 Continue to enhance the professional portfolio; include résumé and samples/evidence.		

CTE Standards and Benchmarks		FS-M/LA	NGSS-Sci
14.0	Demonstrate an understanding of the elements and principles of design – the student will be able to:		
14.01	Identify and explain the elements of design (e.g., texture, pattern, line, form, shape, space, color, light) and how various effects can be achieved.	LAFS.910.L.3.6 LAFS.910.W.3.7,8,9 LAFS.910.W.4.10 LAFS.910,W.2.4,5,6 MAFS.912.G-CO.1.1 MAFS.912.G-MG.1.1	SC.912.P.10.19 SC.912.P.8.2 SC.912.N.1.1
14.02	Identify and explain the principles of design and how they can be used (e.g., proportion, scale, balance, rhythm, emphasis, and harmony).	LAFS.910.L.3.6 LAFS.910.W.3.7,8,9 LAFS.910.W.4.10 LAFS.910,W.2.4,5,6 MAFS.912.G-SRT.1.1 MAFS.912.G-SRT.2.5 MAFS.912.G-CO.2.6	
14.03	Apply the elements and principles of design to Fashion Technology and Design Services.	LAFS.910.L.3.6 LAFS.910.W.3.7,8,9 LAFS.910.W.4.10 LAFS.910,W.2.4,5,6 MAFS.912.G-CO.1.1 MAFS.912.G-MG.1.1 MAFS.912.G-SRT.1.1 MAFS.912.G-SRT.2.5 MAFS.912.G-CO.2.6	SC.912.P.10.19 SC.912.P.8.2 SC.912.N.1.1
14.04	Develop a project applying color and color schemes in a design.	LAFS.910.L.3.6 LAFS.910.W.3.7,8,9 LAFS.910.W.4.10 LAFS.910.W.2.4,5,6	SC.912.P.10.19 SC.912.P.8.2 SC.912.N.1.1
14.05	Use the laws of design to evaluate a design project.	LAFS.910.L.3.6 LAFS.910.W.3.7,8,9 LAFS.910.W.4.10 LAFS.910,W.2.4,5,6	SC.912.N.1.1
14.06	Create an elements and principles section for a design portfolio.	LAFS.910.L.3.6 LAFS.910.W.3.7,8,9 LAFS.910.W.4.10 LAFS.910,W.2.4,5,6	
15.0	Demonstrate an understanding of the terminology used in the apparel industry – the student will be able to:		
15.01	Complete a research project dealing with aspects of fashion retail and production; include terminology, labeling, designers, manufacturers and stores used within the apparel industry.	LAFS.910.L.3.6 LAFS.910.W.3.7,8,9 LAFS.910.W.4.10 LAFS.910,W.2.4,5,6 LAFS.910.SL.1.3	

CTE Standards and Benchmarks	FS-M/LA	NGSS-Sci
16.0 Operate specialty machines (if available) – the student will be able to identify and operate at least two of the following machines:		
16.01 Electronic programmable machines.	LAFS.910.L.3.6 LAFS.910.RL.1.1 LAFS.910.RI.4.10	SC.912.N.1.1
16.02 Serger.	LAFS.910.L.3.6 LAFS.910.RL.1.1 LAFS.910.RI.4.10	SC.912.N.1.1
16.03 Straight stitch machine.	LAFS.910.L.3.6 LAFS.910.RL.1.1 LAFS.910.RI.4.10	SC.912.N.1.1
16.04 Zigzag machine.	LAFS.910.L.3.6 LAFS.910.RL.1.1 LAFS.910.RI.4.10	SC.912.N.1.1
16.05 Embroidery machine.	LAFS.910.L.3.6 LAFS.910.RL.1.1 LAFS.910.RI.4.10	SC.912.N.1.1
17.0 Demonstrate skill in the construction of simple garments – the student will be able to:		
17.01 Identify common ready-to-wear sizes.		
17.02 Identify and describe the characteristics of a properly fitted garment.	LAFS.910.W.4.10 LAFS.910.SL.2.5 LAFS.910.L.3.6 MAFS.912.G-MG.1.1,3 MAFS.912.G-GMD.1.1 MAFS.912.G-GMD.2.4 MAFS.912.G-SRT.1.1 MAFS.912.G-SRT.1.2 MAFS.912.G-SRT.3.6	
17.03 Take accurate body measurements, select pattern size, and determine figure type.	LAFS.910.L.3.6 MAFS.912.G-CO.1.1,2,3,4,5	SC.912.N.1.1
17.04 Interpret verbal, written, and visual directions.	LAFS.910.RI.4.10 LAFS.910.L.3.6	
17.05 Prepare fabric and adjust patterns by following pattern directions.	LAFS.910.RI.4.10 LAFS.910.L.3.6 MAFS.912.G-CO.1.1	
17.06 Lay out, pin, cut, and mark fabric according to pattern specifications.	LAFS.910.RI.4.10 LAFS.910.L.3.6 MAFS.912.G-CO.1.1,2,3,4,5	
17.07 Demonstrate stay stitching and ease stitching.		

CTE Standards and Benchmarks	FS-M/LA	NGSS-Sci
17.08 Demonstrate stitching darts and tucks.	MAFS.912.G-CO.4.12 MAFS.912.G-MG.1.3	
17.09 Identify and match garment pieces using markings; stitch according to directions.	LAFS.910.RI.4.10 LAFS.910.L.3.6 MAFS.912.G-CO.1.1,2,3,4,5	
17.10 Match plaids, stripes and one-way designs.	MAFS.912.G-CO.1.1,4 MAFS.912.G-CO.4.12	
17.11 Demonstrate correct pressing techniques according to fabric requirements.		SC.912.L.18.12 SC.912.P.8.2
17.12 Demonstrate casing and elastic installation.		
17.13 Demonstrate machine hemming according to machine manual instructions.	LAFS.910.RI.4.10 LAFS.910.L.3.6	
17.14 Identify different types of sergers and their characteristics.		
18.0 Demonstrate an understanding of the importance of how eco-fashion decisions impact the environment, consumer health and the working conditions of people in the fashion industry – the student will be able to:		
18.01 Demonstrate an understanding of eco-fashion.	LAFS.910.L.3.6 LAFS.910.W.3.7,8,9 LAFS.910.W.4.10 LAFS.910,W.2.4,5,6 LAFS.910.SL.1.3	SC.912.L.17.20 SC.912.L.17.8
18.02 Identify materials that can be used to make eco-friendly fashions and accessories; describe why these materials are eco-friendly.	LAFS.910.L.3.6 LAFS.910.W.3.7,8,9 LAFS.910.W.4.10 LAFS.910,W.2.4,5,6 LAFS.910.SL.1.3	SC.912.L.17.20 SC.912.L.17.8
18.03 Research innovations in materials and technologies that have contributed to safeguards in the tools and equipment used in fashion technology and design services.	LAFS.910.RI.4.10 LAFS.910.W.3.7,8,9	
18.04 Compare the working conditions of employees when materials are produced following eco-friendly guidelines and when they are not.	LAFS.910.L.3.6 LAFS.910.W.3.7,8,9 LAFS.910.W.4.10 LAFS.910,W.2.4,5,6 LAFS.910.SL.1.3	SC.912.L.17.20 SC.912.L.17.8
18.05 Research methods for using vegetable and plant materials for eco-friendly fashions and replacing these materials into the environment.	LAFS.910.L.3.6 LAFS.910.W.3.7,8,9 LAFS.910.W.4.10 LAFS.910,W.2.4,5,6 LAFS.910.SL.1.3	SC.912.L.17.20 SC.912.L.17.8 SC.912.N.1.1 SC.912.L.14.7 SC.912.L.18.1
18.06 Describe ways to be eco-friendly and the environmental and social responsibilities of eco-friendly methods.	LAFS.910.L.3.6 LAFS.910.W.3.7,8,9 LAFS.910.W.4.10	SC.912.L.17.20 SC.912.L.17.8

CTE Standards and Benchmarks	FS-M/LA	NGSS-Sci
	LAFS.910.W.2.4,5,6 LAFS.910.SL.1.3	
18.07 Design and create an eco-friendly fashion product.		SC.912.L.17.20 SC.912.L.17.8 SC.912.N.1.1

Florida Department of Education
Student Performance Standards

Course Title: Pattern Design Techniques
Course Number: 8506420
Course Credit: 1

Course Description:

This course is designed to further develop competencies in the area of Fashion Technology and Design Services; this course includes researching the effects of history and culture on design, sketching and freehand drawing, the use of technology in the fashion industry, recognition of clothing needs for special populations, and the creation of an original pattern.

Abbreviations:

FS-M/LA = Florida Standards for Math/Language Arts
NGSSS-Sci = Next Generation Sunshine State Standards for Science

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
19.0 Research the ways fashion design is affected by history and culture – the student will be able to:		
19.01 Identify design periods from 1900 to the present.	LAFS.1112.L.3.6 LAFS.1112.RI.3.7 LAFS.1112.W.3.7,8 LAFS.1112.W.4.10 LAFS.1112.W.1.2 LAFS.1112.W.2.4,5,6 LAFS.1112.SL.1.1,3 LAFS.1112.SL.2.4,5,6 LAFS.1112.L.1.1,2	SC.912.L.15.1
19.02 Explain the influence of earlier design periods on contemporary design.	LAFS.1112.L.3.6 LAFS.1112.RI.3.7 LAFS.1112.W.3.7,8 LAFS.1112.W.4.10 LAFS.1112.W.1.2 LAFS.1112.W.2.4,5,6 LAFS.1112.SL.1.1,3 LAFS.1112.SL.2.4,5,6 LAFS.1112.L.1.1,2	SC.912.L.15.1
19.03 Describe the elements and principles of design as they relate to a particular time period/culture.	LAFS.1112.L.3.6 LAFS.1112.RI.3.7 LAFS.1112.W.3.7,8	SC.912.P.10.19 SC.912.P.8.2 SC.912.N.1.1

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
	LAFS.1112.W.4.10 LAFS.1112.W.1.2 LAFS.1112.W.2.4,5,6 LAFS.1112.SL.1.1,3 LAFS.1112.SL.2.4,5,6 LAFS.1112.L.1.1,2	
19.04 Create a multimedia presentation detailing a selected design period.	LAFS.1112.L.3.6 LAFS.1112.RI.3.7 LAFS.1112.W.3.7,8 LAFS.1112.W.4.10 LAFS.1112.W.1.2 LAFS.1112.W.2.4,5,6 LAFS.1112.SL.1.1,3 LAFS.1112.SL.2.4,5,6 LAFS.1112.L.1.1,2	SC.912.N.1.1
20.0 Demonstrate sketching and freehand drawing skills – the student will be able to:		
20.01 Demonstrate sketching and shading techniques.	MAFS.912.N-Q.1.1,2,3 MAFS.912.G-CO.1.1,2,3,4,5 MAFS.912.G-SRT.1.1,2	SC.912.N.3.5
20.02 Create inspiration boards to display sketches and drawings.	LAFS.1112.W.4.10	SC.912.N.1.1
20.03 Develop a design collection according to determined criteria and include in a professional portfolio; include examples that demonstrate sketching and shading techniques.	LAFS.1112.W.4.10	SC.912.N.1.1
21.0 Demonstrate an understanding of the uses of technology in the fashion industry – the student will be able to:		
21.01 Research and list software options available for fashion design services.	LAFS.1112.W.4.10	SC.912.N.1.1
21.02 Demonstrate an understanding of how contemporary technologies (CAD, electronic sewing, knitting, embroidery machines, sergers) are used in the creation of fashion products (e.g., fashion profiles, fabrics, garments).		
21.03 Analyze how specific technologies are used in the fashion design industry.		
21.04 Create a fashion product using two or more technologies appropriately.		SC.912.N.1.1
21.05 Research innovations in materials and technologies that have contributed to safeguards in tools and equipment.	LAFS.1112.W.4.10	SC.912.N.1.1
21.06 Identify the development of tools, equipment and technology used in fashion design services as they relate to particular historical periods.	LAFS.1112.L.3.6 LAFS.1112.W.4.10	SC.912.N.1.1 SC.912.L.15.1
22.0 Identify the psychological and practical needs of clothing for special markets – the student will be able to:		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
22.01 List human and environmental factors that could impact a design (e.g., uniforms, clothing in non-standard sizes, clothing for people with disabilities, maternity wear, clothing for children and the elderly, protective clothing for dangerous conditions and climatic extremes, purpose-designed clothing for sports, leisure, and entertainment industries).	LAFS.1112.L.3.6 LAFS.1112.W.4.10	SC.912.L.17.20
22.02 Plan and implement a fashion design project based on a specific human or environmental factor.		SC.912.L.17.20 SC.912.N.1.1
23.0 Create an original pattern for a garment – the student will be able to:		
23.01 Plan and report on a fashion design project using established criteria.	LAFS.1112.SL.2.4,5,6	SC.912.N.1.1
23.02 Using appropriate software, insert body measurements to produce a pattern.		SC.912.N.1.1
23.03 (Optional) Draft and produce a paper pattern using personal measurements.		
23.04 (Optional) Create slopers for a bodice, skirt, and pants; construct the slopers using grey goods and create a mood board that includes a title, photographs of the sloper, and the purpose/use of a sloper (include in Professional Portfolio).		
23.05 Create a muslin prototype of the pattern.	MAFS.912.G-GMD.2.4	SC.912.N.1.1 SC.912.N.3.5
23.06 Evaluate the prototype for proper fit and adjust as needed.	MAFS.912.G-GMD.2.4	SC.912.N.1.1 SC.912.N.3.5
23.07 Construct a specialty garment according to teacher instructions (the project must include a minimum number of construction skills as designated by the teacher).		SC.912.N.1.1 SC.912.N.3.5
24.0 Demonstrate alteration skills on a sample or garment – the student will be able to:		
24.01 Remove stitches in ready-made garments without damaging fabric.		
24.02 Mark and even a hemline.		
24.03 Lengthen and shorten hems in pants, skirts, or dresses (include cuffs and the use of hem tape).	MAFS.912.G-MG.1.3	
24.04 Remove the flare from pant legs.	MAFS.912.G-CO.2.6,7 MAFS.912.G-GMD.1.3	
24.05 Taper a skirt.	MAFS.912.G-CO.2.6,7 MAFS.912.G-GMD.1.3	
24.06 Shorten the crotch rise in a garment/sample.	MAFS.912.G-CO.2.6,7 MAFS.912.G-GMD.1.3	
24.07 Take in the waist on a man's garment/sample.	MAFS.912.G-CO.2.6,7 MAFS.912.G-GMD.1.3	

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
24.08 Take in the waist on a woman's garment/sample.	MAFS.912.G-CO.2.6,7 MAFS.912.G-GMD.1.3	
24.09 Take in the side seams on a blouse/shirt.	MAFS.912.G-CO.2.6,7 MAFS.912.G-GMD.1.3	
24.10 Shorten sleeves at the cuff on a garment/sample.	MAFS.912.G-CO.2.6,7 MAFS.912.G-GMD.1.3	
24.11 Shorten sleeves at the shoulder cap on a garment/sample.	MAFS.912.G-CO.2.6,7 MAFS.912.G-GMD.1.3	
24.12 Finish seams and press altered areas using pressing techniques.		SC.912.L.18.12 SC.912.P.8.2
25.0 Demonstrate clothing repair on a garment or sample – the student will be able to:		
25.01 Reinforce seams and buttonholes on a garment/sample.		
25.02 Replace zippers in various types of garments/samples (including fly/jeans).		
25.03 Apply patches to a garment/sample.		
25.04 Replace various types of buttons on a garment/sample.		
25.05 Demonstrate appropriate pressing techniques on repaired garments/samples.		SC.912.L.18.12 SC.912.P.8.2

Florida Department of Education
Student Performance Standards

Course Title: Fashion Design Specialist
Course Number: 8506430
Course Credit: 1

Course Description:

This course is designed to further develop competencies in the area of Fashion Technology and Design Services. This course focuses on five specialty areas of Fashion Technology and Design Services: Window Display, Fashion Design Assistant, Tailor’s Assistant, Personal Shopper, and Stylist. Students will select one of these specialty areas and will be expected to follow the performance standards for that area. Also included is an opportunity for job shadowing. Students will be expected to finalize and submit a portfolio.

Abbreviations:

FS-M/LA = Florida Standards for Math/Language Arts
NGSSS-Sci = Next Generation Sunshine State Standards for Science

CTE Standards and Benchmarks		FS-M/LA	NGSSS-Sci
26.0	Identify and describe the different specialties related to Fashion Technology and Design Services (e.g., Window Display, Fashion Design Assistant, Tailor’s Assistant, Personal Shopper, Stylist) – the student will be able to:		
26.01	Identify future trends in Fashion Technology and Design Services.	LAFS.1112.W.3.7	SC.912.N.1.1
26.02	Research, identify, and describe the different job responsibilities of a Window Displayer, Fashion Design Assistant, Tailor’s Assistant, Personal Shopper, and Stylist.	LAFS.1112.W.3.7	SC.912.N.1.1
26.03	Identify, research, and describe current trends related to careers in the Fashion Technology and Design Services industry (e.g., blogger, museum curator, entertainment).		
27.0	Select one specialty area and complete the student performance standards for that area – the student will be able to:		
Window Display			
27.01	Demonstrate knowledge of the elements of design (e.g., color, line, proportion, scale, harmony, light).	MAFS.912.G.CO.1.1 MAFS.912.G-MG.1.1 MAFS.912.G-SRT.1.1 MAFS.912.G-SRT.2.5 MAFS.912.G-CO.2.6	SC.912.P.10.19 SC.912.P.8.2 SC.912.N.1.1
27.02	Demonstrate an understanding of fashion as a form of ethno-cultural expression.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
27.03 Demonstrate space planning in a window display according to given criteria.	MAFS.912.G-SRT.1.1 MAFS.912.G-SRT.2.5	SC.912.P.10.18
27.04 Develop window displays in accordance with seasonal promotions.	MAFS.912.G-SRT.1.1 MAFS.912.G-SRT.2.5	SC.912.P.10.18
27.05 Plan and create a window display project given established criteria.	MAFS.912.G-SRT.1.1 MAFS.912.G-SRT.2.5	SC.912.N.1.1 SC.912.P.10.18
Fashion Design Assistant		
27.06 Demonstrate knowledge of pattern making.	MAFS.912.G-GMD.2.4	
27.07 Apply design draping techniques.		
27.08 Exhibit effective communication skills.		
27.09 Demonstrate computer skills.		
27.10 Demonstrate garment construction skills.		
27.11 Explain the elements of design.	MAFS.912.G-CO.1.1 MAFS.912.G-MG.1.1 MAFS.912.G-SRT.1.1 MAFS.912.G-SRT.2.5 MAFS.912.G-CO.2.6	
27.12 Demonstrate appropriate customer relations skills.		
27.13 Plan and develop a project related to fashion design according to the specifications given by the designer.		SC.912.N.1.1
Tailor's Assistant		
27.14 Select suitable fabric for a tailored jacket using identified criteria.		SC.912.N.1.1
27.15 Select suitable hair canvas, interfacing, linings, and underlining for specified fabric.		SC.912.N.1.1 SC.912.P.8.2 SC.912.L.18.12
27.16 Prepare fabrics and alter patterns according to pattern directions.	MAFS.912.G-CO.1.1	SC.912.N.1.1
27.17 Lay out patterns, bias, plaid, or one-way prints using correct layout procedures.	MAFS.912.G-CO.1.1,2,3, 4,5	SC.912.N.1.1
27.18 Cut patterns, fabric, hair canvas, and linings according to given directions.		SC.912.N.1.1
27.19 Tailor tack markings using the proper techniques.		SC.912.N.1.1
27.20 Baste and fit a garment.	MAFS.912.G-CO.1.3	SC.912.N.1.1

CTE Standards and Benchmarks	FS-M/LA	NGSS-Sci
27.21 Stitch seams using the correct stitches for the fabric.		SC.912.N.1.1
27.22 Apply seam finishes selected from practice samples.		SC.912.N.1.1
27.23 Apply zippers according to the manufacturer's instructions and the application chosen for different types of garments.		SC.912.N.1.1
27.24 Construct tailored pockets.	MAFS.912.G-CO.1.1,3 MAFS.912.G-GPE.2.4,5,6,7	SC.912.N.1.1
27.25 Construct buttonholes.	MAFS.912.G-CO.1.1,3 MAFS.912.G-GPE.2.4,5,6,7	SC.912.N.1.1
27.26 Construct chest pieces, shoulder pads, and sleeve heads.	MAFS.912.G-CO.1.1,3 MAFS.912.G-GPE.2.4,5,6,7	SC.912.N.1.1
27.27 Set in sleeves according to given directions.	MAFS.912.G-CO.1.1,3 MAFS.912.G-GPE.2.4,5,6,7	SC.912.N.1.1
27.28 Construct and apply an upper collar and facings.	MAFS.912.G-CO.1.1,3 MAFS.912.G-GPE.2.4,5,6,7	SC.912.N.1.1
27.29 Construct and apply linings according to fabric requirements.	MAFS.912.G-GMD.2.4	SC.912.N.1.1
27.30 Construct hems using proper techniques for the selected fabric/garment style.	MAFS.912.G-MG.1.3	SC.912.N.1.1
27.31 Select patterns and cut fabric for tailored pants.	MAFS.912.G-CO.1.1,3 MAFS.912.G-GPE.2.4,5,6,7 MAFS.912.G-GMD.2.4 MAFS.912.G-MG.1.3	SC.912.N.1.1
27.32 Alter patterns and cut fabric for tailored pants.	MAFS.912.G-CO.1.1,3 MAFS.912.G-GPE.2.4,5,6,7 MAFS.912.G-GMD.2.4 MAFS.912.G-MG.1.3	SC.912.N.1.1
27.33 Fit and construct tailored pants.	MAFS.912.G-CO.1.1,3 MAFS.912.G-GPE.2.4,5,6,7 MAFS.912.G-GMD.2.4 MAFS.912.G-MG.1.3	SC.912.N.1.1
27.34 Construct and apply linings to tailored pants using appropriate techniques.	MAFS.912.G-CO.1.1,3 MAFS.912.G-GPE.2.4,5,6,7 MAFS.912.G-GMD.2.4	SC.912.N.1.1

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
	MAFS.912.G-MG.1.3	
27.35 Refit and alter a ready-to-wear garment.	MAFS.912.G-CO.1.1,3 MAFS.912.G-GPE.2.4 MAFS.912.G-GPE.2.5,6,7 MAFS.912.G-GMD.2.4 MAFS.912.G-MG.1.3	SC.912.N.1.1
Costume Design		
27.36 Demonstrate taking body measurements using the correct measuring method.		SC.912.N.1.1
27.37 Compare and alter basic patterns.		SC.912.N.1.1
27.38 Construct a basic muslin shell using a customer's measurements and/or a pattern.	MAFS.912.G-GMD.2.4	SC.912.N.1.1
27.39 Transfer fitting changes to paper patterns.		SC.912.N.1.1
27.40 Construct an oak tag board sloper from muslin.		SC.912.N.1.1
27.41 Draft a pattern according to costume specifications.		SC.912.N.1.1
27.42 Identify and describe the styles that suit different body types.		SC.912.N.1.1
27.43 Identify and design garments to suit different body types.		SC.912.N.1.1
27.44 Choose fabric for a specific body type and design based on customer criteria.		SC.912.N.1.1
27.45 Design garments for dance, theater, sports activities, costumes, music videos, and print ads.		SC.912.N.1.1
27.46 Define <i>draping</i> ; demonstrate the draping method of design.		SC.912.N.1.1
Personal Shopper		
27.47 Demonstrate effective communication skills.		
27.48 Identify different body types.		SC.912.L.15.4
27.49 Identify and demonstrate knowledge of appropriate attire for various ages, body types, and occasions.		
27.50 Demonstrate an understanding of the relationship between color and skin tone.		SC.912.P.10.17
27.51 Demonstrate the ability to work within a customer's budget.	MAFS.912.N-Q.1.1,2,3	SC.912.N.1.1
27.52 Coordinate wardrobe essentials.		SC.912.N.1.1

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
27.53 Plan and develop a personal shopping project according to established criteria.		SC.912.N.1.1
27.54 Exhibit the skills necessary for a quality presentation of selections to clients.		SC.912.N.1.1
27.55 Identify future trends in personal shopping.	MAFS.912.S-IC.2.6	SC.912.N.1.1
Stylist		
27.56 Demonstrate effective communication skills.		
27.57 Identify different body types.		SC.912.L.15.4
27.58 Identify and demonstrate knowledge of appropriate attire for various ages, body types, and occasions.		SC.912.N.1.1
27.59 Demonstrate an understanding of the relationship between color and skin tone.		SC.912.P.10.17 SC.912.N.1.1
27.60 Demonstrate the ability to work within a customer's budget.	MAFS.912.N-Q.1.1,2,3	SC.912.N.1.1
27.61 Identify future trends and future techniques in styling sets.	MAFS.912.S-IC.2.6	SC.912.N.1.1
27.62 Identify and select fashion and accessories based on specific criteria.		SC.912.N.1.1
27.63 Explain how the media has helped define fashion and influence design trends.		SC.912.N.1.1
27.64 Coordinate wardrobe essentials.		SC.912.N.1.1
27.65 Plan and develop a stylist project based on established criteria.		SC.912.N.1.1
28.0 (Optional) Schedule and participate in a Fashion Technology and Design Services job shadowing experience – the student will be able to:		
28.01 Research persons working in the Fashion Technology and Design Services profession within the local area.		SC.912.N.1.1
28.02 Formalize, in writing, a job shadowing experience; apply knowledge gained within the program and use the guidelines set by the district, instructor, and employer; use knowledge synthesized within the program.	LAFS.1112.W.1.3 LAFS.1112.W.2.4,5,6	
29.0 Finalize a professional portfolio according to industry standards – the student will be able to:		
29.01 Submit a portfolio; include work samples from the Fashion Technology and Design Services program.	LAFS.1112.W.2.4,5,6	
29.02 Compile and present a Mastery Project Showcase; include the professional portfolio, the technical sewing samples binder, examples of coursework, evidence of awards/honors, evidence of participation in FCCLA (if applicable), samples of constructed garments and slopers and the use of 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

The occupational standards and benchmarks outlined in this secondary program correlate to the standards and benchmarks of the postsecondary program with the same Classification of Instructional Programs (CIP) number.

MyCareerShines is an interactive resource to assist students in identifying their ideal career and to enhance preparation for employment. Teachers are encouraged to integrate this resource into the program curriculum to meet the employability goals for each student.

Career and Technical Student Organization (CTSO)

Florida Family Career and Community Leaders of America (FCCLA) is the intercurricular career and technical student organization(s) 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.

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 Occupational Completion Point (OCP) or a Modified Occupational Completion Point (MOCP). 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 an OCP/MOCP. The student should work on different competencies and new applications of competencies each year toward completion of the OCP/MOCP. 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: Interior Design Services
Program Type: Career Preparatory
Career Cluster: Arts, A/V Technology and Communication

Secondary – Career Preparatory

Program Number	8506500
CIP Number	0450040803
Grade Level	9-12
Standard Length	4 credits
Teacher Certification	Refer to the <u>Program Structure</u> section.
CTSO	FCCLA
SOC Codes (all applicable)	27-1029 – Designers, All Other 41-2031 – Retail Salespersons

Purpose

The purpose of this program is to prepare students for initial employment or continued study in the Interior Design/Decorating industry.

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and the relevant technical knowledge and skills needed to prepare for further education and careers in the Arts, A/V Technology and Communication career cluster; provides technical skill proficiency; includes competency-based applied learning that contributes to 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 Arts, A/V Technology and Communication career cluster.

The content includes, but is not limited to, broad transferable skills and the knowledge and demonstration of the following aspects of the residential design and decoration industry: planning, management, finance, technical and production skills, underlying principles of technology, labor issues, community issues, and health, safety, and environmental issues.

Program Structure

This program is a planned sequence of instruction consisting of four courses.

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:

OCP	Course Number	Course Title	Teacher Certification	Length	SOC Code	Level	Graduation Requirement
A	8506405	Design Services Core	APPRL MFG ϕ 7 @7 G	1 credit	41-2031	2	PA
B	8506540	Principles of Interior Design Services	FAM CON SC 1	1 credit	27-1029	2	PA
C	8506550	Interior Design Techniques	FASH TECH 7G	1 credit	27-1029	2	PA
D	8506560	Interior Design Specialist	HME EC OCC ϕ 7 INT DES 7G TAILORING ϕ 7 TEC ED 1@2 ENG&TEC ED1@2	1 credit	27-1029	3	PA

(Graduation Requirement Abbreviations- EQ= Equally Rigorous Science, PA= Practical Arts, EC= Economics)

Academic Alignment Tables

Academic alignment is an ongoing, collaborative effort of professional educators specializing in the fields of science, mathematics, English/language arts, and Career and Technical Education (CTE). This initiative supports CTE programs by improving student performance through the integration of academic content within CTE courses. Career and Technical Education courses that have been aligned to the Next Generation Sunshine State Standards for Science and the Florida Standards for Mathematics and English/Language Arts will show the following data: the quantity of academic standards in the CTE course; the total number of standards contained in the academic course; and the percentage of alignment to the CTE course.

Courses	Anatomy/ Physiology Honors	Astronomy Solar/Galactic Honors	Biology 1	Chemistry 1	Earth- Space Science	Environmental Science	Genetics	Integrated Science	Marine Science 1 Honors	Physical Science	Physics 1
8506405	4/87 5%	7/80 9%	30/83 36%	6/69 9%	28/67 42%	3/70 4%	5/69 7%	31/82 38%	6/66 9%	30/74 41%	6/72 8%
8506540	5/87 6%	8/80 10%	29/83 35%	5/69 7%	29/67 43%	4/70 6%	4/69 6%	29/82 35%	6/66 9%	31/74 42%	6/72 8%
8506550	25/87 29%	26/80 33%	2/83 2%	26/69 38%	3/67 4%	24/70 34%	25/69 36%	2/82 2%	21/66 32%	3/74 4%	26/72 36%
8506560	22/87 25%	24/80 30%	3/83 4%	24/69 35%	2/67 3%	24/70 34%	22/69 32%	3/82 4%	20/66 30%	5/74 7%	24/72 34%

** Alignment pending review

Alignment attempted, but no correlation to academic course

Courses	Algebra 1	Algebra 2	Geometry	English 1	English 2	English 3	English 4
8506405	27/67 40%	13/75 17%	35/54 65%	18/46 39%	18/45 40%	#	#
8506540	20/67 30%	9/75 12%	20/54 37%	20/46 43%	20/45 44%	#	#
8506550	11/67 16%	18/75 24%	13/54 24%	#	#	17/45 38%	17/45 38%
8506560	10/67 15%	16/75 21%	10/54 19%	#	#	18/45 40%	18/45 40%

** Alignment pending review

Alignment attempted, but no correlation to academic course

Florida Standards for Technical Subjects

Florida Standards (FS) for English Language Arts and Literacy in History/Social Studies, Science, and Technical Subjects are the critical reading and writing literacy standards designed for grade 6 and above. These standards are predicated on teachers of history/social studies, science, and technical subjects using their content area expertise to help students meet the particular challenges of reading, writing, speaking, listening, and language in their respective fields. The FS for Mathematical Practices are designed for grades K-12 and describe varieties of expertise that educators at all levels should seek to develop in their students. These practices rest on important “processes and proficiencies” with longstanding importance in mathematics education.

Instructors must incorporate the Florida Standards for Technical Subjects and Mathematical Practices throughout instruction of this CTE program.

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.

Common Career Technical Core – Career Ready Practices

Career Ready Practices describe the career-ready skills that educators should seek to develop in their students. These practices are not exclusive to a Career Pathway, program of study, discipline or level of education. Career Ready Practices should be taught and reinforced in all career exploration and preparation programs with increasingly higher levels of complexity and expectation as a student advances through a program of study.

1. Act as a responsible and contributing citizen and employee.
2. Apply appropriate academic and technical skills.
3. Attend to personal health and financial well-being.
4. Communicate clearly, effectively and with reason.
5. Consider the environmental, social and economic impacts of decisions.
6. Demonstrate creativity and innovation.
7. Employ valid and reliable research strategies.
8. Utilize critical thinking to make sense of problems and persevere in solving them.
9. Model integrity, ethical leadership and effective management.
10. Plan education and career path aligned to personal goals.
11. Use technology to enhance productivity.
12. Work productively in teams while using cultural/global competence.

Standards

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

- 01.0 Demonstrate leadership and organizational skills.
- 02.0 Demonstrate appropriate basic skills essential to working in design occupations.
- 03.0 Identify and exhibit employment skills.
- 04.0 Describe the relationship between human factors and design services.
- 05.0 Identify the characteristics and care of textiles.
- 06.0 Select and safely use tools and equipment.
- 07.0 Operate and maintain a conventional and/or commercial/industrial sewing machine.
- 08.0 Operate specialty machines (minimum of two machines, if available).
- 09.0 Select and prepare materials.
- 10.0 Construct a machine-sewn design project for inclusion in a design portfolio.
- 11.0 Develop a design portfolio.
- 12.0 Demonstrate the basic skills essential to working in interior design services occupations.
- 13.0 Identify employment opportunities in interior design services.
- 14.0 Identify and exhibit the employment skills required for occupations related to interior design services.
- 15.0 Demonstrate an understanding of the elements and principles of design.
- 16.0 Demonstrate sales techniques in interior design services.
- 17.0 Demonstrate an understanding of entrepreneurship.
- 18.0 Identify and describe components of the design process.
- 19.0 Research the effects of history and culture on interior design.
- 20.0 Demonstrate sketching and freehand drawing skills.
- 21.0 Demonstrate the ability to use interior design services software.
- 22.0 Explain how human, environmental, and ergonomic factors impact design solutions.
- 23.0 Demonstrate knowledge of rendering techniques for presentations.
- 24.0 Plan and develop a design project.
- 25.0 Identify and describe the different specialties related to interior design services.
- 26.0 Plan and develop a complete interior design project in the specialty area selected.
- 27.0 (Optional) Schedule and participate in an interior design services job shadowing experience.
- 28.0 Finalize a portfolio according to industry standards.

Florida Department of Education
Student Performance Standards

Course Title: Design Services Core
Course Number: 8506405
Course Credit: 1

Course Description:

This course is designed to develop competencies in areas of the interior design industry or fashion technology and design industry. This course includes essential basic skills for working in Interior Design Services, leadership and organizational skills, basic principles of design, textile characteristics and care, employability skills, relationship between human factors and interior design, the safe use of tools and equipment, and the selection of appropriate materials.

Abbreviations:

FS-M/LA = Florida Standards for Math/Language Arts
NGSSS-Sci = Next Generation Sunshine State Standards for Science

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
01.0 Demonstrate leadership and organizational skills – the student will be able to:		
01.01 Identify professional and youth organizations.	LAFS.910.SL.1.1,2,3 LAFS.910.SL.2.4,5,6 LAFS.910.L.1.1,2 LAFS.910.RI.4.10 LAFS.910.W.3.7,8	
01.02 Identify the purposes and functions of professional and youth organizations.	LAFS.910.SL.1.1,2,3 LAFS.910.SL.2.4,5,6 LAFS.910.L.1.1,2 LAFS.910.W.4.10 LAFS.910.W.3.7,8	
01.03 Identify the roles and responsibilities of members.	LAFS.910.SL.1.1,2,3 LAFS.910.SL.2.4,5,6 LAFS.910.L.1.1,2 LAFS.910.W.4.10 LAFS.910.W.3.7,8	
01.04 Demonstrate cooperation as a group member to achieve organizational goals.	LAFS.910.SL.1.1,2,3 LAFS.910.SL.2.4,5,6 LAFS.910.L.1.1,2 LAFS.910.W.4.10 LAFS.910.W.3.7,8	

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
01.05 Demonstrate confidence in leadership roles and organizational responsibilities.	LAFS.910.SL.1.1,2,3 LAFS.910.SL.2.4,5,6 LAFS.910.L.1.1,2 LAFS.910.W.4.10 LAFS.910.W.3.7,8	
02.0 Demonstrate appropriate basic skills essential to working in design services occupations – the student will be able to:		
02.01 Identify the knowledge, skills, and attitudes necessary to perform occupational tasks (e.g., email, phone, conversations with clients).	LAFS.910.SL.2.4 LAFS.910.L.3.6	
02.02 Demonstrate the communication competencies required to perform occupational tasks.	LAFS.910.SL.2.4 LAFS.910.L.3.6	
03.0 Identify and exhibit employment skills – the student will be able to:		
03.01 Use the Internet to conduct a job search.	LAFS.910.SL.1.1,2,3 LAFS.910.SL.2.4,5,6 LAFS.910.L.1.1,2 LAFS.910.RI.4.10 LAFS.910.W.4.10 LAFS.910.W.3.7,8,9	
03.02 Research and synthesize information about an industry-related employment opportunity or advanced training opportunities; include information pertaining to local post-secondary educational programs and training opportunities.	LAFS.910.SL.1.1,2,3 LAFS.910.SL.2.4,5,6 LAFS.910.L.1.1,2 LAFS.910.RI.4.10 LAFS.910.W.4.10 LAFS.910.W.3.7,8,9 MAFS.912.A.REI.1.1, MAFS.912.A.REI.2.3 MAFS.912.F.IF.3.9 MAFS.912.S.ID.1.1	
03.03 Demonstrate proficiency in current technology and software related to the fashion design industry; create, revise, retrieve and verify information.	LAFS.910.SL.1.1,2,3 LAFS.910.SL.2.4,5,6 LAFS.910.L.1.1,2 LAFS.910.RI.4.10 LAFS.910.W.4.10 LAFS.910.W.3.7,8,9	
03.04 Apply the principles of time management, work simplification, and teamwork when performing assigned tasks.		
03.05 Demonstrate pride in the quality of work performed.		
04.0 Describe the relationship between human factors and design services – the student will be able to:		
04.01 Define the <i>elements</i> of design applicable to interior design (space, line, shape, form, texture, color).	LAFS.910.L.3.6 LAFS.910.W.3.7,8,9	SC.912.P.10.19 SC.912.P.8.2

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
	LAFS.910.W.4.10 LAFS.910.W.2.4 LAFS.910.W.2.5,6 MAFS.912.G.CO.1.1 MAFS.912.G-MG.1.1	SC.912.N.1.1
04.02 Define the <i>principles</i> of design applicable to design (proportion, scale, balance, emphasis, rhythm, harmony).	LAFS.910.L.3.6,7,8,9 LAFS.910.W.4.10 LAFS.910.W.2.4,5,6 MAFS.912.G-SRT.1.1 MAFS.912.G-SRT.2.5 MAFS.912.G-CO.2.6	
04.03 Explain the impact of human factors (psychological, physiological, social) on decisions relating to design services processes.	LAFS.910.L.1.3 LAFS.910.W.4.10	SC.912.L.17.20
04.04 Identify and describe the modifications necessary to accommodate individuals with special needs.	LAFS.910.L.3.6 MAFS.912.G-CO.1.1,2,3,4,5	SC.912.N.1.1
04.05 Identify and describe the impact of human needs and wants on the cost of design services and customized projects.	LAFS.910.L.3.6 MAFS.912.N-Q.1.1,2,3	
04.06 Identify and describe the importance of barrier-free design and accessibility related to design services.	LAFS.910.L.3.6	
04.07 Identify and describe the characteristics of interior spaces, furnishings, and garments.	LAFS.910.L.3.6 MAFS.912.G-MG.1.1,3 MAFS.912.G-GMD.1.1 MAFS.912.G-GMD.2.4 MAFS.912.G-SRT.1.1,2 MAFS.912.G-SRT.3.6	SC.912.N.1.1
04.08 Take accurate measurements to determine the correct size home furnishings items.	LAFS.910.L.3.6 MAFS.912.G-CO.1.1,2,3,4,5	SC.912.N.1.1
05.0 Identify the characteristics and care of textiles – the student will be able to:		
05.01 Identify and describe fiber characteristics.	LAFS.910.L.3.6 LAFS.910.RI.4.10 LAFS.910.SL.1.1 LAFS.910.W.4.10	SC.912.N.1.1 SC.912.L.15.4
05.02 Identify and describe types of fabric construction (e.g., knitted, woven, tufted).	LAFS.910.L.3.6 LAFS.910.RI.4.10 LAFS.910.SL.1.1 LAFS.910.W.4.10 MAFS.912.G-CO.1.1	SC.912.N.1.1 SC.912.L.15.4

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
05.03 Identify and describe types of fabric finishes (e.g., dyed, printed, performance/quality enhancements).	LAFS.910.L.3.6 LAFS.910.RI.4.10 LAFS.910.SL.1.1 LAFS.910.W.4.10	SC.912.N.1.1 SC.912.L.15.4
05.04 Identify and describe different types of natural and manufactured textiles; identify the pros/cons, uses, and care of each type.	LAFS.910.L.3.6 LAFS.910.RI.4.10 LAFS.910.SL.1.1 LAFS.910.W.4.10	SC.912.N.1.1 SC.912.L.15.4
05.05 Identify the laws and regulations governing the textile industry; include labeling laws and care symbols.	LAFS.910.L.3.6 LAFS.910.RI.4.10 LAFS.910.SL.1.1 LAFS.910.W.4.10	SC.912.N.1.1 SC.912.L.15.4
06.0 Select and safely use tools and equipment – the student will be able to:		
06.01 Identify the tools and equipment used in design services for sewing, cutting, measuring, fabric marking, and drafting.	LAFS.910.L.3.6	SC.912.N.1.1
06.02 Select the appropriate tools and equipment for assigned projects; explain why the selection is appropriate for the project.		SC.912.N.1.1
06.03 Demonstrate proper and safe usage of tools and equipment.	LAFS.910.SL1.1	SC.912.N.1.1
06.04 Identify and demonstrate safety procedures for the use of conventional sewing machines and home sergers, and pressing equipment.	LAFS.910.SL1.1	
06.05 Explain the importance of observing Occupational Safety and Health Administration (OSHA) rules and regulations.	LAFS.910.SL1.1	SC.L.18.12
06.06 Clean and maintain various types of tools and equipment.	LAFS.910.SL1.1	
06.07 Keep an inventory record of tools, equipment, supplies, and materials using computer application software or other formatting options (e.g., written records).	LAFS.910.SL1.1 LAFS.910.W.4.10	
06.08 Research innovations in materials and technologies that contribute to safeguards in the tools and equipment used in interior design services.	LAFS.910.RI.4.10 LAFS.910.W.3.7,8,9	
06.09 Identify and apply drafting tools and techniques to a specific design services project (e.g., architectural ruler, light box, protractor, floor plans to scale, one-point perspective).	LAFS.910.L.3.6 MAFS.912.G-MG.1.1	SC.912.L.15.4
07.0 Operate and maintain a conventional and/or commercial/industrial sewing machine – the student will be able to:		
07.01 Identify the parts of a sewing machine.	LAFS.910.L.3.6 LAFS.910.RL.1.1 LAFS.910.RI.4.10	SC.912.P.10.18
07.02 Select the needles that appropriate for different fabric types; identify the process and demonstrate needle insertion.	LAFS.910.L.3.6 LAFS.910.RL.1.1 LAFS.910.RI.4.10 MAFS.912.G-MG.1.2	

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
	MAFS.912.G-MG.1.3	
07.03 Identify the steps and demonstrate threading a sewing machine.	LAFS.910.L.3.6 LAFS.910.RL.1.1 LAFS.910.RI.4.10	
07.04 Diagram and demonstrate the ability to wind the bobbin, thread the bobbin case, and insert the bobbin correctly into a sewing machine.	LAFS.910.L.3.6 LAFS.910.RL.1.1 LAFS.910.RI.4.10 MAFS.912.G-MG.1.2,3	SC.912.P.12.3
07.05 Demonstrate straight stitching.	LAFS.910.L.3.6 LAFS.910.RL.1.1 LAFS.910.RI.4.10	
07.06 Identify and demonstrate stitch length and width selection.	LAFS.910.L.3.6 LAFS.910.RL.1.1 LAFS.910.RI.4.10 MAFS.912.N-Q.1.1 MAFS.912.A.SSE.1.1 MAFS.912.F.LE.2.5	
07.07 Demonstrate utility and decorative stitches.	LAFS.910.L.3.6 LAFS.910.RL.1.1 LAFS.910.RI.4.10 MAFS.912.F.LE.2.5	
07.08 Identify the tension and demonstrate tension adjustment.	LAFS.910.L.3.6 LAFS.910.RL.1.1 LAFS.910.RI.4.10	SC.912.P.12.3
07.09 Demonstrate cleaning and lubricating the machine following manufacturer's instructions.	LAFS.910.L.3.6 LAFS.910.RL.1.1 LAFS.910.RI.4.10	SC.912.N.1.1
08.0 Operate specialty machines (minimum of two machines, if available) – the student will be able to identify and operate at least two of the following machines:		
08.01 Electronic programmable machine.	LAFS.910.L.3.6 LAFS.910.RL.1.1 LAFS.910.RI.4.10	SC.912.N.1.1
08.02 Serger.	LAFS.910.L.3.6 LAFS.910.RL.1.1 LAFS.910.RI.4.10	SC.912.N.1.1
08.03 Pleater, ruffler foot, or gathering foot.	LAFS.910.L.3.6 LAFS.910.RL.1.1 LAFS.910.RI.4.10	SC.912.N.1.1
08.04 Blindstitch machine or blind hemming foot.	LAFS.910.L.3.6 LAFS.910.RL.1.1 LAFS.910.RI.4.10	SC.912.N.1.1

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
08.05 Straight stitch machine.	LAFS.910.L.3.6 LAFS.910.RL.1.1 LAFS.910.RI.4.10	SC.912.N.1.1
08.06 Chain stitch machine or five thread serger.	LAFS.910.L.3.6 LAFS.910.RL.1.1 LAFS.910.RI.4.10	SC.912.N.1.1
08.07 Cutting machine or electric cutting system.	LAFS.910.L.3.6 LAFS.910.RL.1.1 LAFS.910.RI.4.10	SC.912.N.1.1
08.08 Bar tack or programmable/computerized sewing machine.	LAFS.910.L.3.6 LAFS.910.RL.1.1 LAFS.910.RI.4.10	SC.912.N.1.1
08.09 Zigzag machine.	LAFS.910.L.3.6 LAFS.910.RL.1.1 LAFS.910.RI.4.10	SC.912.N.1.1
09.0 Select and prepare materials – the student will be able to:		
09.01 Identify and match pattern pieces.	LAFS.910.L.3.6 LAFS.910.RL.1.1 LAFS.910.RI.4.10 MAFS.912.G-CO.1.5 MAFS.912.G-CO.2.6,7,8	
09.02 Read and interpret instructions and specifications.	LAFS.910.L.3.6 LAFS.910.RL.1.1 LAFS.910.RI.4.10	
09.03 Identify fabric content.	LAFS.910.L.3.6 LAFS.910.RL.1.1 LAFS.910.RI.4.10	SC.912.N.1.1 SC.912.L.15.4
09.04 Prepare fabric.	LAFS.910.L.3.6 MAFS.912.G-CO.1.1	
09.05 Adjust patterns according to pattern/teacher instructions.	LAFS.910.RI.4.10 LAFS.910.L.3.6 MAFS.912.G-CO.1.1,2,3,4,5	
09.06 Lay out, pin, cut, and mark fabric according to a pattern or teacher instructions.	LAFS.910.RI.4.10 LAFS.910.L.3.6 MAFS.912.G-CO.1.1,2,3,4,5	
09.07 Demonstrate stay stitching and ease stitching.	LAFS.910.L.3.6	
09.08 Match grain lines and patterns according to a pattern or teacher instructions.	LAFS.910.RI.4.10 LAFS.910.L.3.6 MAFS.912.G-	

CTE Standards and Benchmarks		FS-M/LA	NGSSS-Sci
		CO.1.1,2,3,4,5	
09.09	Mark fabric for assembly according to a pattern or teacher instructions.	LAFS.910.RI.4.10 LAFS.910.L.3.6	SC.912.L.18.12 SC.912.P.8.2
09.10	Mark fabric for trims according to a pattern or teacher instructions.	LAFS.910.RI.4.10 LAFS.910.L.3.6	SC.912.L.18.12 SC.912.P.8.2
09.11	Match thread with fabric.	LAFS.910.L.3.6	
09.12	Identify, select, and use content labels according to fabric requirements.	LAFS.910.RI.4.10 LAFS.910.L.3.6	
10.0	Construct a machine-sewn design project for inclusion in a design portfolio – the student will be able to:		
10.01	Construct projects that include seaming, darts, interfacing, seam finishing, hemming, closures and pockets.	LAFS.910.RI.4.10 LAFS.910.L.3.6 MAFS.912.G- CO.1.1,2,3,4,5	
10.02	Line up notches, dots, or clips according to a pattern or teacher instructions.	LAFS.910.RI.4.10 LAFS.910.L.3.6	
10.03	Stitch on woven, stretch, or specialty fabrics using the appropriate stitch length.	LAFS.910.RI.4.10 LAFS.910.L.3.6	
10.04	Demonstrate correct pressing techniques by following fabric requirements.	LAFS.910.RI.4.10 LAFS.910.L.3.6	SC.912.L.18.12 SC.912.P.8.2
10.05	Demonstrate machine hemming according to machine manual instructions.	LAFS.910.RI.4.10 LAFS.910.L.3.6	
11.0	Develop a design portfolio – the student will be able to:		
11.01	Assemble a portfolio; include all work samples.	LAFS.910.W.2.4,5,6	
11.02	Assemble a Technical Sewing Samples binder.		
11.03	Construct basic hand-stitching techniques (e.g., running, backstitch, overcast, blanket).	LAFS.910.L.3.6	
11.04	Demonstrate stay stitching and ease stitching.	LAFS.910.L.3.6	
11.05	Demonstrate straight seams, clean finish and other seam finishes; include common seam allowances (e.g., 1/4", 5/8").	LAFS.910.L.3.6	
11.06	Demonstrate hemming techniques (e.g., slip stitch, blind hem stitch).	LAFS.910.L.3.6	

Florida Department of Education
Student Performance Standards

Course Title: Principles of Interior Design Services
Course Number: 8506540
Course Credit: 1

Course Description:

This course is designed to further develop competencies in interior design services. This course includes the exploration of employment opportunities in interior design services, the basic skills essential to working in this industry, employability skills, the elements and principles of design, sales techniques, and an understanding of entrepreneurship.

Abbreviations:

FS-M/LA = Florida Standards for Math/Language Arts
NGSSS-Sci = Next Generation Sunshine State Standards for Science

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
12.0 Demonstrate the basic skills essential to working in interior design services occupations – the student will be able to:		
12.01 Identify the mathematics knowledge, skills, and attitudes necessary to perform occupational tasks.	LAFS.910.L.3.6 LAFS.910.RI.4.10 LAFS.910.W.4.10 LAFS.910.RI.2.4 MAFS.912.N-Q.1.2,3	
12.02 Identify the scientific knowledge, skills, and attitudes necessary to perform occupational tasks.	LAFS.910.L.3.6 LAFS.910.RI.4.10 LAFS.910.W.4.10 LAFS.910.RI.2.4	SC.912.N.1.1,2
12.03 Demonstrate math competencies necessary to perform occupational tasks.	LAFS.910.L.3.6 LAFS.910.RI.4.10 LAFS.910.W.4.10 LAFS.910.RI.2.4 MAFS.912.N-Q.1.2,3	
12.04 Demonstrate scientific competencies necessary to perform occupational tasks.	LAFS.910.L.3.6 LAFS.910.RI.4.10 LAFS.910.W.4.10 LAFS.910.RI.2.4 LAFS.910.SL.2.4,5,6	SC.912.N.1.1,2,3
12.05 Distinguish between mass production versus individual-specific design needs.	LAFS.910.RI.1.1 LAFS.910.SL.2.4	

CTE Standards and Benchmarks		FS-M/LA	NGSSS-Sci
13.0	Identify employment opportunities in Interior Design Services – the student will be able to:		
13.01	Identify occupations in interior design services (e.g., interior designer, interior decorator, architect, architectural drafter, architectural illustrator, model maker).	LAFS.910.RI.4.10 LAFS.910.W.3.7	
13.02	Identify personal skills and interests that relate to careers in interior design.	LAFS.910.RI.4.10 LAFS.910.RI.1.1 LAFS.910.W.3.7	
13.03	Identify the levels of training, degrees, and/or certifications required for occupations in interior design.	LAFS.910.RI.4.10 LAFS.910.RI.1.1 LAFS.910.W.3.7	
13.04	Identify the duties and responsibilities associated with occupations in interior design.	LAFS.910.RI.4.10 LAFS.910.RI.1.1 LAFS.910.W.3.7	
13.05	Identify ways to achieve career advancement in interior design occupations.	LAFS.910.RI.4.10 LAFS.910.RI.1.1 LAFS.910.W.3.7	
13.06	Identify career options in interior design (e.g., entrepreneurship, apprenticeship).	LAFS.910.RI.4.10 LAFS.910.RI.1.1 LAFS.910.W.3.7	
13.07	Analyze current trends as they relate to the future of occupations in interior design.	LAFS.910.RI.4.10 LAFS.910.RI.1.1 LAFS.910.W.3.7 LAFS.910.RI.1.3	
13.08	Identify earning and wage level options (entry level, mid-level, professional) for occupations in interior design.	LAFS.910.RI.4.10 LAFS.910.RI.1.1 LAFS.910.W.3.7	
14.0	Identify and exhibit the employment skills required for occupations related to interior design services – the student will be able to:		
14.01	Identify and list documents that may be required to apply for a job (e.g., résumé, cover letter or letter of interest, portfolio).	LAFS.910.RI.4.10 LAFS.910.RI.1.1 LAFS.910.W.3.7,8,9	
14.02	Accurately complete a job application form.	LAFS.910.W.4.10	
14.03	Use role playing techniques to demonstrate competence in job interview procedures.	LAFS.910.SL.1.1,3	
14.04	Identify and demonstrate appropriate responses to criticism from an employer, supervisor, co-worker, and/or client/customer.	LAFS.910.SL.1.3	
14.05	Identify and demonstrate acceptable work habits, including a positive attitude.	LAFS.910.SL.1.2	
14.06	Demonstrate knowledge of how to make job changes appropriately.	LAFS.910.SL.1.2	
14.07	Identify and describe acceptable employee health and hygiene habits.	LAFS.910.RI.4.10 LAFS.910.RI.1.1 LAFS.910.W.3.7,8,9	SC.912.L.14.6

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
14.08 Demonstrate customer relations skills by synthesizing given instructions.	LAFS.910.RI.4.10 LAFS.910.SL.2.6 LAFS.910.W.2.6 LAFS.910.W.4.10	
14.09 Develop and create a résumé and portfolio following a specified format.		
15.0 Demonstrate an understanding of the elements and principles of design – the student will be able to:		
15.01 Identify the elements of design (e.g., texture, pattern, line, form and shape, space, color, light) and explain how various effects can be achieved; present information in a written report, oral report, or demonstration.	LAFS.910.L.3.6 LAFS.910.RI.1.1 LAFS.910.SL.2.4,5,6	SC.912.P.10.18,19,21
15.02 Identify the principles of design (e.g., proportion, scale, balance, rhythm, emphasis, and harmony) and explain how they can be used effectively in interior design; present information in a written report, oral report, or demonstration.	LAFS.910.L.3.6 LAFS.910.RI.1.1 LAFS.910.SL.2.4,5,6 MAFS.912.G-SRT.1.1,2	
15.03 Apply the elements and principles of design to an interior design project.	LAFS.910.L.3.6 LAFS.910.RI.1.1 LAFS.910.SL.2.4,5,6	
15.04 Develop a plan to apply color and color schemes to an interior design project.	LAFS.910.L.3.6 LAFS.910.RI.1.1 LAFS.910.SL.2.4,5,6	SC.912.P.10.18
15.05 Use the principles and elements of design to evaluate the merits of a design.	LAFS.910.L.3.6 LAFS.910.RI.1.1,3 LAFS.910.SL.2.4,5,6	
16.0 Demonstrate sales techniques in Interior Design Services – the student will be able to:		
16.01 Identify, ask, and answer questions coherently and concisely.	LAFS.910.W.3.7,8 LAFS.910.W.2.4,5,6 LAFS.910.SL.1.1,2,3 LAFS.910.SL.2.4,5,6	
16.02 Read and follow written instructions; listen to and follow oral instructions.	LAFS.910.RI.4.10 LAFS.910.SL.2.6	
16.03 Give sales presentations orally and in writing.	LAFS.910.SL.2.4 LAFS.910.W.1.2 LAFS.910.W.2.4,5,6	
16.04 Find information on sales products and services (e.g., associated costs, time of arrival for products, completion time of services, contracts, warranties, return policies).	LAFS.910.W.3.7,8 LAFS.910.W.4.10 LAFS.910.W.3.9:B	
16.05 Research and recommend products that meet the customer’s needs and specifications.	LAFS.910.W.3.7,8 LAFS.910.W.2.4,5,6 LAFS.910.SL.1.1,2,3 LAFS.910.SL.2.4,5,6	

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
16.06 Demonstrate appropriate computer and telecommunications skills.	LAFS.910.W.2.4,6 LAFS.910.SL.2.5	
16.07 Recognize the importance of a sense of responsibility and ethical behavior in the Interior Design Services industry.	LAFS.910.W.1.2 LAFS.910.W.3.8 LAFS.910.RI.3.8	
17.0 Demonstrate an understanding of entrepreneurship – the student will be able to:		
17.01 Define <i>entrepreneurship</i> .	LAFS.910.L.3.6 LAFS.910.RI.2.4	
17.02 Compare the advantages and disadvantages of business ownership in a written report or a presentation.	LAFS.910.W.3.7,8 LAFS.910.W.2.4,5,6 LAFS.910.SL.1.1,2,3 LAFS.910.SL.2.4,5,6	
17.03 Identify and describe the characteristics and responsibilities of an entrepreneur.	LAFS.910.W.3.7,8 LAFS.910.W.2.4,5,6 LAFS.910.SL.1.2,3 LAFS.910.SL.2.4,5,6	

Florida Department of Education
Student Performance Standards

Course Title: Interior Design Techniques
Course Number: 8506550
Course Credit: 1

Course Description:

This course is designed to further develop competencies in Interior Design Services. This course includes components of the design process, the effects of history and culture on design, sketching and freehand drawing, factors that impact design (human, environmental, ergonomic), rendering techniques, and the development of a design project.

Abbreviations:

FS-M/LA = Florida Standards for Math/Language Arts
NGSSS-Sci = Next Generation Sunshine State Standards for Science

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
18.0 Identify and describe components of the design process – the student will be able to:		
18.01 Recognize the steps in the design process.	LAFS.1112.L.3.6 LAFS.1112.RI.4.10	
18.02 Develop a flow chart that illustrates the steps in the design process (e.g., determine the need, brainstorm, design the brief, research, plan, fabricate, evaluate).	LAFS.1112.W.3.8 LAFS.1112.W.1.2	
18.03 Prepare and present a demonstration of the design process.	LAFS.1112.SL.2.4,5,6	
19.0 Research the effects of history and culture on interior design – the student will be able to:		
19.01 Identify design periods from 1900 to the present (e.g., Art Nouveau, Art Deco, Contemporary, Traditional, Industrial).	LAFS.1112.W.3.8 LAFS.1112.RI.3.9 LAFS.1112.L.3.6	
19.02 Explain the influence of earlier design periods on contemporary design.	LAFS.1112.W.3.8 LAFS.1112.RI.3.9 LAFS.1112.L.3.6	
19.03 Describe the elements and principles of design as they relate to a particular time period/culture.	LAFS.1112.W.3.8 LAFS.1112.RI.3.9 LAFS.1112.L.3.6	
19.04 Select a design period and create a multimedia presentation.	LAFS.1112.W.3.8 LAFS.1112.RI.3.9 LAFS.1112.L.3.6 LAFS.1112.W.2.6	

CTE Standards and Benchmarks		FS-M/LA	NGSSS-Sci
20.0	Demonstrate sketching and freehand drawing skills – the student will be able to:		
20.01	Demonstrate sketching and shading techniques.	LAFS.1112.L.3.6 LAFS.1112.W.4.10	
20.02	Create mats or frames for the display of sketches and drawings.	LAFS.1112.L.3.6 LAFS.1112.W.4.10	
20.03	Select and develop a design project using sketching and shading techniques to include in a portfolio.	LAFS.1112.L.3.6 LAFS.1112.W.4.10	
21.0	Demonstrate the ability to use Interior Design Services software – the student will be able to:		
21.01	Research and list software applications typically used in the interior design industry.	LAFS.1112.W.3.7,8,9 LAFS.1112.W.2.6	
21.02	Identify and discuss the benefits of using software in the workplace.	LAFS.1112.L.3.6 LAFS.1112.W.4.10 LAFS.1112.SL.1.1,2	
21.03	Read and interpret a blueprint.	LAFS.1112.RI.1.1,2	
21.04	Evaluate floor plans for the purpose of interior décor and design.	LAFS.1112.RI.1.1,2 MAFS.912.N-Q.1.1,2,3	
21.05	Illustrate size and scale in a drawing.	LAFS.1112.W.4.10 MAFS.912.N-Q.1.1,2,3 MAFS.912.G-SRT.1.1,2	
22.0	Explain how human, environmental, and ergonomic factors impact design solutions – the student will be able to:		
22.01	List human factors that could impact a design (e.g., location, climate, availability, cost, personal taste/style, lifestyle).	LAFS.1112.W.3.7,8,9 LAFS.1112.RI.3.7	SC.912.N.4.2
22.02	Demonstrate knowledge of how the dimensions of the human body affect the outcome of a specific design project.	LAFS.1112.W.3.7,8,9 LAFS.1112.RI.3.7	
22.03	Plan and implement a design project by focusing on a specific human, environmental or ergonomic factor.	LAFS.1112.W.3.7,8,9 LAFS.1112.RI.3.7 MAFS.912.G-MG.1.3	
22.04	Examine the positive and negative effect a design concept has had on the environment.	LAFS.1112.W.3.7,8,9 LAFS.1112.RI.3.7 MAFS.912.G-MG.1.3	SC.912.N.4.2
23.0	Demonstrate knowledge of rendering techniques for presentations – the student will be able to:		
23.01	Given established criteria, apply all learned rendering skills to create a high quality presentation (e.g., presentation board, model, slideshow).	LAFS.1112.SL.2.4 LAFS.1112.2.5,6 LAFS.1112.W.4.10 LAFS.1112.RI.1.1	
24.0	Plan and develop a design project – the student will be able to:		
24.01	Use established criteria to plan and report on a design project.	LAFS.1112.SL.2.4,5,6	

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
	LAFS.1112.SL.1.2	
24.02 Calculate the measurements for a design project (e.g., area, size, circumference).	MAFS.912.N-Q.1.1,2,3 MAFS.912.G-SRT.1.1	
24.03 Use drafting techniques to develop a design project.	LAFS.1112.SL.2.4,5,6 LAFS.1112.SL.1.2 MAFS.912.G- CO.4.12,13	

Florida Department of Education
Student Performance Standards

Course Title: Interior Design Specialist
Course Number: 8506560
Course Credit: 1

Course Description:

This course is designed to further develop competencies in interior design. This course focuses on four specialty areas: kitchen and bath planning; floor, wall, and window treatments; furniture, lighting and accessories; and audiovisual and security systems. Students will select on one of those specialty areas and follow the performance standards for that area. Students will develop a design project and finalize and submit a portfolio.

Abbreviations:

FS-M/LA = Florida Standards for Math/Language Arts
NGSSS-Sci = Next Generation Sunshine State Standards for Science

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
25.0 Identify and describe the different specialties related to interior design services – the student will be able to:		
25.01 Identify future trends in interior décor and design.	LAFS.1112.W.3.8 LAFS.1112.RI.3.9 LAFS.1112.L.3.6	
25.02 Research, identify and describe the different job responsibilities of a kitchen and bath planner, a floor covering/window and wall treatment consultant, a furniture, lighting and accessory specialist, and an audiovisual and security system specialist.	LAFS.1112.W.3.7,8 LAFS.1112.SL.W.3.9 LAFS.1112.SL.W.4.10 LAFS.1112.SL.W.1.2 LAFS.1112.SL.2.4,5,6 LAFS.1112.RI.4.10	
Select one specialty area (listed below) and complete the student performance standards for that area:		
Kitchen and Bath		
25.03 Identify the principles and elements of kitchen and bath design.	LAFS.1112.L.3.6 LAFS.1112.RI.1.1 LAFS.1112.SL.2.4,5,6	
25.04 Identify space-planning criteria used in kitchen and bath design.	LAFS.1112.L.3.6 LAFS.1112.RI.1.1 LAFS.1112.SL.2.4,5,6 MAFS.912.G-CO.4.12	

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
25.05 Identify safety guidelines for the materials used in kitchen and bath design.	LAFS.1112.L.3.6 LAFS.1112.RI.1.1 LAFS.1112.SL.2.4,5,6	
25.06 Analyze the fixtures, equipment, appliances, carpentry, cabinets, surfaces, finished materials, and mechanical and electrical systems used in kitchen and bath designs.	LAFS.1112.L.3.6 LAFS.1112.RI.1.1 LAFS.1112.SL.2.4,5,6	SC.912.P.10.13,15
25.07 Research new trends in kitchen and bath design.	LAFS.1112.L.3.6 LAFS.1112.RI.1.1 LAFS.1112.SL.2.4,5,6 LAFS.1112.W.3.7,8,9	
25.08 Demonstrate knowledge of kitchen and bath design relative to the total residential floor plan.	LAFS.1112.L.3.6 LAFS.1112.RI.1.1 LAFS.1112.SL.2.4,5,6	
Floor, Window, and Wall Treatments		
25.09 Identify and describe the characteristics of different types of floor coverings (e.g., wood, ceramic tile, concrete/masonry, carpet).	LAFS.1112.W.1.1,2 LAFS.1112.W.2.4,5,6	
25.10 List and compare the durability and maintenance factors for floor covering materials.	LAFS.1112.W.1.1,2 LAFS.1112.W.2.4,5,6	
25.11 Develop criteria for the selection of floor coverings; include considerations of color, texture, type, style, pattern, client's lifestyle, energy conservation, and environmental safety.	LAFS.1112.W.1.1,2 LAFS.1112.W.2.4,5,6	SC.912.P.10.2,18
25.12 Measure and calculate space and materials for a floor covering application based on the client's specifications.	LAFS.1112.W.1.1,2 LAFS.1112.W.2.4,5,6 MAFS.912.G-CO.4.12 MAFS.912.N-Q.1.2,3	
25.13 Identify and describe the characteristics of different types of wall treatments.	LAFS.1112.W.1.1,2 LAFS.1112.W.2.4,5,6	
25.14 Compare durability and maintenance factors for wall treatment materials.	LAFS.1112.W.1.1,2 LAFS.1112.W.2.4,5,6	
25.15 Develop criteria for the selection of wall treatments; include considerations of color, texture, type, and style, pattern, client's lifestyle, energy conservation, and environmental safety.	LAFS.1112.W.1.1,2 LAFS.1112.W.2.4,5,6	SC.912.P.10.2,7 SC.912.L.14.6
25.16 Identify and describe different types and functions of windows and window treatments.	LAFS.1112.W.1.1,2 LAFS.1112.W.2.4,5,6	
25.17 Categorize window treatments as drapery or non-drapery.	LAFS.1112.W.1.1,2 LAFS.1112.W.2.4,5,6	
25.18 Identify and describe the characteristics of non-drapery window treatments.	LAFS.1112.W.1.1,2 LAFS.1112.W.2.4,5,6	
25.19 Identify and describe the characteristics of fabrics used for window treatments.	LAFS.1112.W.1.1,2 LAFS.1112.W.2.4,5,6	
25.20 Describe the characteristics of draperies and drapery headings.	LAFS.1112.W.1.1,2 LAFS.1112.W.2.4,5,6	

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
25.21 Recognize different types and uses of hardware for window treatments.	LAFS.1112.W.1.1,2 LAFS.1112.W.2.4,5,6	
25.22 Identify and describe different window treatment styles.	LAFS.1112.W.1.1,2 LAFS.1112.W.2.4,5,6	
25.23 Compare durability and maintenance factors for window treatment materials.	LAFS.1112.W.1.1,2 LAFS.1112.W.2.4,5,6	
25.24 Develop criteria for the selection of window treatments; include considerations of color, texture, type, style, pattern, client's lifestyle, energy conservation, and environmental safety.	LAFS.1112.W.1.1,2 LAFS.1112.W.2.4,5,6	SC.912.P.10.2,7 SC.912.L.14.6
25.25 Demonstrate knowledge of floor, window, and wall treatments as they relate to the total residential floor plan.	LAFS.1112.W.1.1,2 LAFS.1112.W.2.4,5,6	
Furniture, Lighting and Accessories		
25.26 Identify and describe the historical characteristics of furniture styles.	LAFS.1112.W.3.7,8,9 LAFS.1112.RI.1.1,2,3	
25.27 Identify and describe the various methods of furniture construction.	LAFS.1112.W.3.7,8,9 LAFS.1112.RI.1.1,2,3	
25.28 Compare and contrast types of wood and illustrate comparisons in an informal presentation, written report, or computerized presentation.	LAFS.1112.W.3.7,8,9 LAFS.1112.L.3.6 LAFS.1112.RI.1.1,2,3	
25.29 Describe different types of wood finishes and the care required for each type.	LAFS.1112.W.3.7,8,9 LAFS.1112.RI.1.1,2,3	
25.30 Compare and contrast the synthetic fibers and materials (e.g., nylon, polyester, rayon, plastic) and the natural fibers and materials (e.g., cotton, paper, silk, wool, wood) used in furniture construction.	LAFS.1112.W.3.7,8,9 LAFS.1112.RI.1.1,2,3 LAFS.1112.L.3.6	SC.912.L.17.11
25.31 Identify and describe the appropriate accessories for a specific setting (e.g., home, office, function).	LAFS.1112.W.2.5 LAFS.1112.SL.2.4,5,6	
25.32 Demonstrate groupings and the placement of furniture, lighting and accessories.		
25.33 Identify and describe different types of lighting fixtures and lightbulbs.	LAFS.1112.W.3.7,8,9 LAFS.1112.RI.1.1,2,3	SC.912.P.10.13,18
25.34 Select and identify appropriate lighting for specific spaces; include general, task, and ambiance lighting; consider lifestyles and energy conservation specifications.	LAFS.1112.W.3.7,8,9 LAFS.1112.RI.1.1,2,3 LAFS.1112.L.3.6	SC.912.P.10.2,18
25.35 Demonstrate knowledge of furniture, lighting, and accessories relative to the total residential floor plan.	LAFS.1112.W.4.10 LAFS.1112.RI.4.10 LAFS.1112.SL.2.6	
Audio Visual and Security Systems		
25.36 Identify and select materials and finishes for environments requiring acoustic specifications (e.g., media room).	LAFS.1112.W.3.7,8,9 LAFS.1112.RI.1.1,2,3	SC.912.P.10.21

CTE Standards and Benchmarks		FS-M/LA	NGSSS-Sci
25.37	Develop criteria for the selection of audiovisual and security systems for specific spaces; consider lifestyle, energy conservation, local ordinances and state codes.	LAFS.1112.RI.3.8 LAFS.1112.W.4.10 LAFS.1112.RI.4.10 LAFS.1112.SL.2.6	SC.912.P.10.2
25.38	Demonstrate knowledge of audiovisual and security systems relative to the total residential floor plan.	LAFS.1112.W.4.10 LAFS.1112.RI.4.10 LAFS.1112.SL.2.6	
26.0	Plan and develop a complete interior design project in the specialty area selected – the student will be able to:		
26.01	Read and interpret a blueprint for a specified interior design project.	LAFS.1112.RI.1.1,2	
26.02	Plan and write a design project for a specified client profile; apply the elements and principles of design.	LAFS.1112.W.4.10 LAFS.1112.W.3.7,8,9	
26.03	Calculate measurements for the design project (e.g., area, size, circumference).	LAFS.1112.W.3.7,8,9 LAFS.1112.RI.1.1,2,3 LAFS.1112.L.3.6 MAFS.912.N-Q.1,2,3 MAFS.912.G-SRT.1.1	
26.04	Select the appropriate materials and products for the project.	LAFS.1112.W.3.7,8,9 LAFS.1112.L.3.6 LAFS.1112.RI.1.1,2,3	
26.05	Measure and calculate the materials needed for a client-specified project.	LAFS.1112.W.1.1,2 LAFS.1112.W.2.4,5,6 MAFS.912.N-Q.1,2,3	
26.06	Estimate the number of products needed for the client's project.		
26.07	Determine the client's budgetary limitations.	MAFS.912.N-Q.1,2,3	
26.08	Estimate the cost required to implement the plan; evaluate the estimate in relation to the client's budget.	MAFS.912.N-Q.1,2,3	
26.09	Create a presentation board and make an oral presentation to the client.	LAFS.1112.W.2.4,5,6 LAFS.1112.SL.2.4,5,6	
27.0	(Optional) Schedule and participate in interior design services job shadowing experience – the student will be able to:		
27.01	Research persons working in the interior design services profession within the local area.	LAFS.1112.W.3.7,8,9 LAFS.1112.W.4.10	
27.02	Synthesize and apply knowledge gained throughout the course of the program to write a formal report about the job shadowing experience.	LAFS.1112.W.2.4,5,6 LAFS.1112.W.4.10	
28.0	Finalize a portfolio according to industry standards – the student will be able to:		
28.01	Submit a professional portfolio; include all coursework samples from the program.	LAFS.1112.W.2.4,5,6 LAFS.1112.W.3.7,8,9 LAFS.1112.W.4.10	

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

MyCareerShines is an interactive resource to assist students in identifying their ideal career and to enhance preparation for employment. Teachers are encouraged to integrate this resource into the program curriculum to meet the employability goals for each student.

Career and Technical Student Organization (CTSO)

Florida Family Career and Community Leaders of America (FCCLA) is the intercurricular career and technical student organization(s) 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.

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 Occupational Completion Point (OCP) or a Modified Occupational Completion Point (MOCP). 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 an OCP/MOCP. The student should work on different

competencies and new applications of competencies each year toward completion of the OCP/MOCP. 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: Commercial Art Technology
Program Type: Career Preparatory
Career Cluster: Arts, A/V Technology and Communication

Secondary – Career Preparatory

Program Number	8718000
CIP Number	0650040208
Grade Level	9-12
Standard Length	10 credits
Teacher Certification	Refer to the <u>Program Structure</u> section.
CTSO	SkillsUSA
SOC Codes (all applicable)	27-1014 Multimedia Artists and Animators 27-1029 Designers All Others 27-1024 Graphic Designers

Purpose

The purpose of this program is to prepare students for employment as artists and related workers, illustrators, and commercial designers.

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and the relevant technical knowledge and skills needed to prepare for further education and careers in the Arts, A/V Technology and Communication 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 Arts, A/V Technology and Communication career cluster.

The content includes, but is not limited to, basic art skills, lettering skills, preparation of layouts and illustrations, preparation of camera ready paste-up, and development of specialized 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 ten courses in four 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 secondary program structure:

OCP	Course Number	Course Title	Teacher Certification	Length	SOC Code	Level	Graduation Requirement
A	8718010	Commercial Art Technology 1	COMM ART @7 7G GRAPHIC COMM 7G	1 credit	27-1024	2	PA
	8718020	Commercial Art Technology 2		1 credit		2	PA
	8718030	Commercial Art Technology 3		1 credit		2	PA
B	8718040	Commercial Art Technology 4		1 credit	27-1029	2	PA
	8718050	Commercial Art Technology 5		1 credit		2	PA
	8718060	Commercial Art Technology 6		1 credit		2	PA
C	8718070	Commercial Art Technology 7		1 credit	27-1014	2	PA
	8718080	Commercial Art Technology 8		1 credit		2	PA
D	8718090	Commercial Art Technology 9		1 credit	27-1024	3	PA
	8718091	Commercial Art Technology 10		1 credit		3	PA

(Graduation Requirement Abbreviations- EQ= Equally Rigorous Science, PA= Practical Arts, EC= Economics)

Florida Standards for Technical Subjects

Florida Standards (FS) for English Language Arts and Literacy in History/Social Studies, Science, and Technical Subjects are the critical reading and writing literacy standards designed for grade 6 and above. These standards are predicated on teachers of history/social studies, science, and technical subjects using their content area expertise to help students meet the particular challenges of reading, writing, speaking, listening, and language in their respective fields. The FS for Mathematical Practices are designed for grades K-12 and describe varieties of expertise that educators at all levels should seek to develop in their students. These practices rest on important “processes and proficiencies” with longstanding importance in mathematics education.

Instructors must incorporate the Florida Standards for Technical Subjects and Mathematical Practices throughout instruction of this CTE program.

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.

Common Career Technical Core – Career Ready Practices

Career Ready Practices describe the career-ready skills that educators should seek to develop in their students. These practices are not exclusive to a Career Pathway, program of study, discipline or level of education. Career Ready Practices should be taught and reinforced in all career exploration and preparation programs with increasingly higher levels of complexity and expectation as a student advances through a program of study.

1. Act as a responsible and contributing citizen and employee.
2. Apply appropriate academic and technical skills.
3. Attend to personal health and financial well-being.
4. Communicate clearly, effectively and with reason.
5. Consider the environmental, social and economic impacts of decisions.
6. Demonstrate creativity and innovation.
7. Employ valid and reliable research strategies.
8. Utilize critical thinking to make sense of problems and persevere in solving them.
9. Model integrity, ethical leadership and effective management.
10. Plan education and career path aligned to personal goals.
11. Use technology to enhance productivity.
12. Work productively in teams while using cultural/global competence.

Standards

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

- 01.0 Demonstrate proficiency in the elements and principles of design.
- 02.0 Demonstrate proficiency in art and design skills.
- 03.0 Demonstrate an understanding of type design.
- 04.0 Demonstrate proficiency in layout.
- 05.0 Demonstrate proficiency in applied design.
- 06.0 Demonstrate proficiency in graphic art computer skills.
- 07.0 Demonstrate proficiency in graphic production.
- 08.0 Demonstrate an understanding of employability in commercial art and graphic media.
- 09.0 Demonstrate an understanding of entrepreneurship.
- 10.0 Demonstrate proficiency in website planning and the design process.
- 11.0 Develop markup language structures.
- 12.0 Create basic webpages.
- 13.0 Incorporate images and graphical formatting on a webpage.
- 14.0 Incorporate form structures on a webpage.
- 15.0 Describe frame structures and the usage of these structures.
- 16.0 Use Cascading Style Sheets (CSS).
- 17.0 Examine web design technologies and techniques.
- 18.0 Describe the process for publishing a website.
- 19.0 Describe how website performance is monitored and analyzed.
- 20.0 Create an informational website.

Florida Department of Education
Student Performance Standards

Course Title: Commercial Art Technology 1
Course Number: 8718010
Course Credit: 1

Course Description:

This course is designed to provide instruction in the elements and principles of design.

Abbreviations:

FS-M/LA = Florida Standards for Math/Language Arts

NGSSS-Sci = Next Generation Sunshine State Standards for Science

Note: This course is pending alignment in the following categories: FS-M/LA and NGSSS-Sci.

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
01.0 Demonstrate proficiency in the elements and principles of design – the student will be able to:		
01.01 Explain proper use and care of tools and equipment.		
01.02 Discuss the legal and ethical issues related to graphic design.		
01.03 Apply the principles and elements of design.		
01.04 Demonstrate a basic understanding of vector drawing programs.		
01.05 Demonstrate a basic understanding of photo-editing / photo-manipulation programs.		
01.06 Apply color theory (pigment versus light).		
01.07 Utilize tones, hues, and values.		
01.08 Sketch designs using pencil and ink.		
01.09 Mix and apply colors to produce desired hues, tints, and shades.		
01.10 Apply color for impact (color psychology) and demonstrate an understanding of color theory.		
01.11 Differentiate between line, halftone, duotone, spot, RGB, four-color process, and web-safe colors.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
01.12 Demonstrate 2-D design capabilities.		
01.13 Demonstrate designs with symmetry and asymmetry.		
01.14 Develop grids for traditional and digital layouts for print and web media.		
01.15 Create freehand designs and objects for visualization and presentation.		
01.16 Demonstrate harmony and contrast of line and shape.		
01.17 Demonstrate harmony and contrast of color and tone.		
01.18 Demonstrate harmony and contrast of proportion.		
01.19 Demonstrate harmony and contrast of texture pattern.		
01.20 Demonstrate harmony and contrast of motion.		
01.21 Indicate style of layout design appropriate to the target audience.		
01.22 Make a collage.		
01.23 Begin developing a professional portfolio (to be updated as the student progresses through the program).		
01.24 (Optional) Create a sign on poster board.		

Florida Department of Education
Student Performance Standards

Course Title: Commercial Art Technology 2
Course Number: 8718020
Course Credit: 1

Course Description:

This course is designed to provide instruction in art and design skills.

Abbreviations:

FS-M/LA = Florida Standards for Math/Language Arts

NGSSS-Sci = Next Generation Sunshine State Standards for Science

Note: This course is pending alignment in the following categories: FS-M/LA and NGSSS-Sci.

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
02.0 Demonstrate proficiency in art and design skills – the student will be able to:		
02.01 Explain proper use and care of tools.		
02.02 Make computations for centering, spacing, and scaling drawings.		
02.03 Draw on various types of media.		
02.04 Illustrate using ink, pencil, washes, markers, tempera, watercolor, and paints.	SEE NOTE	
02.05 Demonstrate renderings of different textures using the above listed media.	SEE NOTE	
02.06 Make illustrations using various objects.	SEE NOTE	
02.07 Make a montage illustration.	SEE NOTE	
02.08 Draw a cartoon.		
02.09 Interpret information from drawings, prints, and sketches.		
02.10 Draw freehand sketches.		
02.11 Draw a one-point perspective and a two-point perspective.		

CTE Standards and Benchmarks	FS-M/LA	NGSS-Sci
02.12 Make corrections to a drawing.		
02.13 Develop a glossary of technical terms.		
02.14 Analyze an object to determine size, shape, and proportion.		
02.15 Draw an oblique drawing.		
02.16 Draw an isometric drawing.		

Florida Department of Education
Student Performance Standards

Course Title: Commercial Art Technology 3
Course Number: 8718030
Course Credit: 1

Course Description:

This course is designed to provide instruction in type design.

Abbreviations:

FS-M/LA = Florida Standards for Math/Language Arts
NGSSS-Sci = Next Generation Sunshine State Standards for Science

Note: This course is pending alignment in the following categories: FS-M/LA and NGSSS-Sci.

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
03.0 Demonstrate an understanding of type design – the student will be able to:		
03.01 Define typographic terms (e.g., <i>leading</i> , <i>kerning</i>).		
03.02 Identify and select typographic applications.		
03.03 Demonstrate the ability to proofread, to use proofreader’s marks, and to run a spell check.		
03.04 Explain picas, points, and conversion to inches.		
03.05 Explain specification of type and copy fitting.		
03.06 Identify and select typographic styles.		
03.07 Define basic letter structures.		
03.08 Demonstrate mixing of families of type.		
03.09 Identify and select lettering styles.		
03.10 Determine and select lettering styles for layout sketches.		

Florida Department of Education
Student Performance Standards

Course Title: Commercial Art Technology 4
Course Number: 8718040
Course Credit: 1

Course Description:

This course is designed to provide instruction in layout.

Abbreviations:

FS-M/LA = Florida Standards for Math/Language Arts

NGSSS-Sci = Next Generation Sunshine State Standards for Science

Note: This course is pending alignment in the following categories: FS-M/LA and NGSSS-Sci.

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
04.0 Demonstrate proficiency in layout – the student will be able to:		
04.01 Identify the parts of a layout.		
04.02 Create thumbnail sketches.		
04.03 Create roughs and comprehensives from thumbnail sketches.		
04.04 Prepare computer roughs from pencil layouts.		
04.05 Prepare digital-ready artwork from comprehensives; prepare files that are print-ready and presentation-ready.		
04.06 Crop and scale artwork and/or photos for layouts.		
04.07 Use adhesives.		
04.08 Demonstrate the use of effects or styles.		
04.09 Explain layout and color trends.		

Florida Department of Education
Student Performance Standards

Course Title: Commercial Art Technology 5
Course Number: 8718050
Course Credit: 1

Course Description:

This course is designed to provide instruction in applied design techniques.

Abbreviations:

FS-M/LA = Florida Standards for Math/Language Arts

NGSSS-Sci = Next Generation Sunshine State Standards for Science

Note: This course is pending alignment in the following categories: FS-M/LA and NGSSS-Sci.

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
05.0 Demonstrate proficiency in applied design – the student will be able to:		
05.01 Locate and identify resource materials for inspiration; develop a file or idea bank.		
05.02 Design logos.		
05.03 Design stationery layouts.		
05.04 Design a magazine, book cover, album artwork, and CD cover.		
05.05 Design an ad campaign that includes newspapers, magazines, billboards, and television; demonstrate continuity.		
05.06 Design a greeting card.		
05.07 Design a business card.		
05.08 Apply advertising psychology.		
05.09 Produce an industrial brochure and/or consumer brochure.		
05.10 Design a consumer brochure.		
05.11 Construct a package design.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
05.12 Produce computer-assisted artwork.		
05.13 Continue developing a professional portfolio.		

Florida Department of Education
Student Performance Standards

Course Title: Commercial Art Technology 6
Course Number: 8718060
Course Credit: 1

Course Description:

This course is designed to provide instruction in graphic art computer skills.

Abbreviations:

FS-M/LA = Florida Standards for Math/Language Arts

NGSSS-Sci = Next Generation Sunshine State Standards for Science

Note: This course is pending alignment in the following categories: FS-M/LA and NGSSS-Sci.

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
06.0 Demonstrate proficiency in graphic art computer skills – the student will be able to:		
06.01 Demonstrate graphic art computer skills using appropriate graphic art programs and hardware.		
06.02 Use software and hardware to manipulate and adjust various drawings, photos, and graphic material by computer.		
06.03 Produce finished computer projects that reflect current and/or emergent trends in graphic art technology.		
06.04 Operate various input devices for computer graphics, such as scanners and cameras.		
06.05 Demonstrate proficiency in vector and raster programs.		
06.06 (Optional) Make an orthographic drawing using digital software.		
06.07 Continue developing a professional portfolio.		

Florida Department of Education
Student Performance Standards

Course Title: Commercial Art Technology 7
Course Number: 8718070
Course Credit: 1

Course Description:

This course is designed to provide instruction in graphic production and employability skills.

Abbreviations:

FS-M/LA = Florida Standards for Math/Language Arts

NGSSS-Sci = Next Generation Sunshine State Standards for Science

Note: This course is pending alignment in the following categories: FS-M/LA and NGSSS-Sci.

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
07.0 Demonstrate proficiency in graphic production – the student will be able to:		
07.01 Define the differences in production processes and estimate relative costs.		
07.02 Recognize the limitations for printing and dissemination on the Internet.		
07.03 Identify and select different printing surfaces (e.g., embossing/debossing, silk lamination, varnish, foil, thermography, die cut, letterpress, silkscreen).		
07.04 Identify and select appropriate printing inks.		
07.05 Identify and select finishing processes.		
07.06 Identify standard industry material sizes.		
07.07 Specify types of folds.		
07.08 Make a print on a plotter.		
07.09 Demonstrate proficiency in preparing files for output via print media and web content (preflight).		
08.0 Demonstrate an understanding of employability in commercial art and graphic media – the student will be able to:		
08.01 Identify and create a résumé, references, cover letter, and a thank you letter.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
08.02 Relay instructions to others orally and in writing.		
08.03 Define and explain graphic design terms.		
08.04 Identify common industry questions.		
08.05 Make project presentations.		
08.06 Explain appropriate interactions with an employer, fellow employees, and customers.		
08.07 Identify potential career pathways.		
08.08 Understand the importance of networking with other people in the profession.		
08.09 Conduct a job search.		
08.10 Develop a professional digital portfolio.		

Florida Department of Education
Student Performance Standards

Course Title: Commercial Art Technology 8
Course Number: 8718080
Course Credit: 1

Course Description:

This course is designed to provide instruction in graphic art computer skills and airbrush skills for the illustrator.

Abbreviations:

FS-M/LA = Florida Standards for Math/Language Arts
 NGSSS-Sci = Next Generation Sunshine State Standards for Science

Note: This course is pending alignment in the following categories: FS-M/LA and NGSSS-Sci.

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
09.0 Demonstrate an understanding of entrepreneurship – the student will be able to:		
09.01 Define <i>entrepreneurship</i> .		
09.02 Describe the importance of entrepreneurship to the American economy.		
09.03 List the advantages and disadvantages of business ownership.		
09.04 Identify the risks involved in ownership of a business.		
09.05 Identify the necessary personal characteristics of a successful entrepreneur.		
09.06 Identify the business skills needed to operate a small business efficiently and effectively.		
09.07 Create a business plan.		
10.0 Demonstrate proficiency in website planning and the design process – the student will be able to:		
10.01 Discuss the importance of information architecture to web design and development.		
10.02 Conduct a client interview to determine the purpose and needs of the business.		
10.03 Conduct a competitive analysis of similar industry sites.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
10.04 Identify stages in the web design process and describe the activities comprising each stage.		
10.05 Define the site structure by creating a content map, storyboard, and associated wireframes.		
10.06 Discuss the legal and ethical issues related to web design and web content.		
10.07 Describe accessibility and its implications on web design.		
10.08 Create a website mock-up for client approval.		
10.09 Continue developing a professional traditional and digital portfolio.		

Florida Department of Education
Student Performance Standards

Course Title: Commercial Art Technology 9
Course Number: 8718090
Course Credit: 1

Course Description:

This course is designed to provide instruction in the development of markup language structures, the creation of basic webpages, and the incorporation of form structures in a webpage.

Abbreviations:

FS-M/LA = Florida Standards for Math/Language Arts
NGSSS-Sci = Next Generation Sunshine State Standards for Science

Note: This course is pending alignment in the following categories: FS-M/LA and NGSSS-Sci.

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
11.0 Develop markup language structures – the student will be able to:		
11.01 Define common markup languages and understand the usage of these languages.		
11.02 Identify common devices.		
11.03 Determine device and browser support and the appropriate usage of markup languages (existing and emerging).		
12.0 Create basic webpages – the student will be able to:		
12.01 Create basic webpage structures using common markup elements and attributes.		
12.02 Incorporate list structures in a webpage (ordered, unordered, definition, nested).		
12.03 Incorporate link structures in a webpage (external, internal, email).		
12.04 Research web color usage principles and incorporate in a webpage.		
13.0 Incorporate images and graphical formatting on a webpage – the student will be able to:		
13.01 Describe usage guidelines (e.g., format types, size, relevance) for integrating images and graphics into a webpage.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
13.02 Compare and contrast standard image formats used in webpage design.		
13.03 Incorporate graphics into a webpage design.		
13.04 Create and incorporate image maps in a webpage.		
13.05 Optimize images and graphics for use in a webpage.		
13.06 Incorporate bootstrap layout.		
14.0 Incorporate form structures in a webpage – the student will be able to:		
14.01 Create an accessible form using common elements; include form, fieldset, legend, text area, select, option, button, and input (radio, checkbox, submit, reset, image, password, hidden).		
14.02 Describe and diagram the relationship between XHTML forms and server-side technologies.		
14.03 Compare and contrast the GET and POST methods for forms handling.		
14.04 Define <i>form validation</i> and describe how it is accomplished.		
14.05 List popular server-side technologies used to process content sent from XHTML forms.		
14.06 Use labels with form elements.		
14.07 Connect an XHTML form to a server-side script for processing.		

Florida Department of Education
Student Performance Standards

Course Title: Commercial Art Technology 10
Course Number: 8718091
Course Credit: 1

Course Description:

This course is designed to provide instruction in advanced webpage design.

Abbreviations:

FS-M/LA = Florida Standards for Math/Language Arts

NGSSS-Sci = Next Generation Sunshine State Standards for Science

Note: This course is pending alignment in the following categories: FS-M/LA and NGSSS-Sci.

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
15.0 Describe frame structures and the usage of these structures – the student will be able to:		
15.01 Explore <i>frame</i> and <i>iframe</i> structures and support issues.		
15.02 Describe appropriate uses of iframes.		
15.03 Incorporate frame structure in a webpage.		
16.0 Use Cascading Style Sheets (CSS) – the student will be able to:		
16.01 Define CSS and describe its importance in web design.		
16.02 Compare and contrast existing and emerging CSS versions.		
16.03 Determine browser support and the appropriate usage of CSS (existing and emerging versions).		
16.04 Explain “document flow” and describe its implications on web design.		
16.05 Recognize and use element selectors, ID selectors, class selectors, pseudo-class selectors, and descendant selectors.		
16.06 Explain how inheritance and specificity affect CSS rule conflicts.		
16.07 Use inline styles, embedded style sheets, and external style sheets.		

CTE Standards and Benchmarks	FS-M/LA	NGSS-Sci
16.08 Use the link and import methods to connect to an external style sheet.		
16.09 Use CSS shorthand techniques to create efficient and concise style sheets.		
16.10 Apply basic CSS properties (background, border, clear color, float, font, height, line-height, list-style, margin, overflow, padding position, text-align, text-indent, width, z-index, padding).		
16.11 Use CSS to style tables (e.g., borders, width, spacing, alignment, background).		
16.12 Use CSS to enhance the appearance and usability of an XHTML form.		
17.0 Examine web design technologies and techniques – the student will be able to:		
17.01 Compare and contrast common authoring tools.		
17.02 Compare and contrast client-side and server-side technologies.		
17.03 Define e-commerce types and usages.		
17.04 Describe database connectivity relative to websites.		
17.05 Identify technologies to enhance user experiences.		
18.0 Describe the process for publishing a website – the student will be able to:		
18.01 Explore domain name selection principles.		
18.02 Identify the process for registering a domain name.		
18.03 Compare and contrast hosting providers, features, and selection criteria.		
18.04 Describe the various means for uploading website files (e.g., FTP, web-based tools).		
19.0 Describe how website performance is monitored and analyzed – the student will be able to:		
19.01 Identify issues related to website maintenance.		
19.02 Use webpage validation tools.		
19.03 Describe website performance metrics (e.g., visits, time-on-page, time-on-site) and discuss the implication of performance metrics on design.		
19.04 Demonstrate knowledge of accessibility problems and solutions.		
19.05 Examine indexing, page ranking, and basic Search Engine Optimization (SEO) techniques.		

CTE Standards and Benchmarks	FS-M/LA	NGSS-Sci
19.06 Explore common website analytic tools.		
20.0 Create an informational website – the student will be able to:		
20.01 Use Content Management System (CMS) web authoring software to create a multipage informational website.		
20.02 Use image-editing software to enhance website designs with simple graphics.		
20.03 Use animation software to enhance website designs.		
20.04 Enhance the website using client-side technologies (e.g., rollovers, plug-ins, pop-up windows).		
20.05 Demonstrate efficient and consistent website development practices (e.g., the use of templates, snippets).		

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 occupational standards and benchmarks outlined in this secondary program correlate to the standards and benchmarks of the postsecondary program with the same Classification of Instructional Programs (CIP) number.

MyCareerShines is an interactive resource to assist students in identifying their ideal career and to enhance preparation for employment. Teachers are encouraged to integrate this resource into the program curriculum to meet the employability goals for each student.

Career and Technical Student Organization (CTSO)

SkillsUSA is the intercurricular career and technical student organization(s) 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.

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 Occupational Completion Point (OCP) or a Modified Occupational Completion Point (MOCP). 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 an OCP/MOCP. The student should work on different competencies and new applications of competencies each year toward completion of the OCP/MOCP. 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: 3-D Animation Technology
Program Type: Career Preparatory
Career Cluster: Arts, A/V Technology and Communication

Secondary – Career Preparatory

Program Number	8718100
CIP Number	0610030400
Grade Level	9-12
Standard Length	7 credits
Teacher Certification	Refer to the <u>Program Structure</u> section.
CTSO	SkillsUSA
SOC Codes (all applicable)	27-1014 - Multimedia Artists and Animators

Purpose

The purpose of this program is to prepare students for employment in the field of 3-D Animation and related career fields.

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 Arts, A/V Technology and Communication 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 Arts, A/V Technology and Communication career cluster.

The content includes, but is not limited to, practical experiences in 3-D Animation design and production. Specialized skills such as video editing, audio production, and the utilization of animation and authoring software are used to produce a variety of multimedia productions.

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 four 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 secondary program structure:

OCP	Course Number	Course Title	Teacher Certification	Length	SOC Code	Level	Graduation Requirement
A	8718110	3-D Animation Technology 1	BUS ED 1 @ 2 COMM ART @7 7G COMPU SCI 6 ELECT DP @7 %G TEC ELEC \$7 G TV PRO TEC @7 7G	27-1014	2	PA	27-1014
B	8718120	3-D Animation Technology 2		27-1014	2	PA	27-1014
	8718130	3-D Animation Technology 3			2	PA	
C	8718140	3-D Animation Technology 4		27-1014	2	PA	27-1014
	8718150	3-D Animation Technology 5			2	PA	
D	8718160	3-D Animation Technology 6		27-1014	2	PA	27-1014
	8718170	3-D Animation Technology 7		2	PA		

(Graduation Requirement Abbreviations- EQ= Equally Rigorous Science, PA= Practical Arts, EC= Economics)

Academic Alignment Table

Academic alignment is an ongoing, collaborative effort of professional educators specializing in the fields of science, mathematics, English/language arts, and Career and Technical Education (CTE). This initiative supports CTE programs by improving student performance through the integration of academic content within CTE courses. Career and Technical Education courses that have been aligned to the Next Generation Sunshine State Standards for Science and the Florida Standards for Mathematics and English/Language Arts will show the following data: the quantity of academic standards in the CTE course; the total number of standards contained in the academic course; and the percentage of alignment to the CTE course.

Courses	Anatomy/Physiology Honors	Astronomy Solar/Galactic Honors	Biology 1	Chemistry 1	Earth-Space Science	Environmental Science	Genetics	Integrated Science	Marine Science 1 Honors	Physical Science	Physics 1
8718110	#	1/80 1%	19/83 23%	1/69 1%	20/67 30%	#	#	19/82 23%	#	21/74 28%	#
8718120	#	#	#	#	#	#	#	#	#	#	#
8718130	5/87 6%	5/80 6%	20/83 24%	5/69 7%	23/67 34%	2/70 3%	1/69 1%	24/82 29%	3/66 5%	24/74 32%	4/72 6%
8718140	19/87 22%	14/80 18%	#	24/69 35%	4/67 6%	21/70 30%	20/69 29%	4/82 5%	17/66 26%	5/74 7%	24/72 33%
8718150	5/87 6%	1/80 1%	#	1/69 1%	1/67 1%	1/70 1%	1/69 1%	1/82 1%	1/66 2%	1/74 1%	1/72 1%
8718160	5/87 6%	2/80 3%	#	1/69 1%	2/67 3%	#	#	1/82 1%	1/66 2%	1/74 1%	2/72 3%
8718170	7/87 8%	5/80 6%	3/83 4%	5/69 7%	4/67 6%	5/70 7%	3/69 4%	5/82 6%	5/66 8%	5/74 7%	4/72 6%

** Alignment pending review

Alignment attempted, but no correlation to academic course

Courses	Algebra 1	Algebra 2	Geometry	English 1	English 2	English 3	English 4
8718110	**	**	**	**	**	**	**

8718120	**	**	**	**	**	**	**
8718130	**	**	**	**	**	**	**
8718140	**	**	**	**	**	**	**
8718150	**	**	**	**	**	**	**
8718160	**	**	**	**	**	**	**
8718170	**	**	**	**	**	**	**

** Alignment pending review

Alignment attempted, but no correlation to academic course

Florida Standards for Technical Subjects

Florida Standards (FS) for English Language Arts and Literacy in History/Social Studies, Science, and Technical Subjects are the critical reading and writing literacy standards designed for grade 6 and above. These standards are predicated on teachers of history/social studies, science, and technical subjects using their content area expertise to help students meet the particular challenges of reading, writing, speaking, listening, and language in their respective fields. The FS for Mathematical Practices are designed for grades K-12 and describe varieties of expertise that educators at all levels should seek to develop in their students. These practices rest on important “processes and proficiencies” with longstanding importance in mathematics education.

Instructors must incorporate the Florida Standards for Technical Subjects and Mathematical Practices throughout instruction of this CTE program.

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.

Common Career Technical Core – Career Ready Practices

Career Ready Practices describe the career-ready skills that educators should seek to develop in their students. These practices are not exclusive to a Career Pathway, program of study, discipline or level of education. Career Ready Practices should be taught and reinforced in all career exploration and preparation programs with increasingly higher levels of complexity and expectation as a student advances through a program of study.

1. Act as a responsible and contributing citizen and employee.
2. Apply appropriate academic and technical skills.
3. Attend to personal health and financial well-being.
4. Communicate clearly, effectively and with reason.
5. Consider the environmental, social and economic impacts of decisions.
6. Demonstrate creativity and innovation.
7. Employ valid and reliable research strategies.
8. Utilize critical thinking to make sense of problems and persevere in solving them.
9. Model integrity, ethical leadership and effective management.
10. Plan education and career path aligned to personal goals.
11. Use technology to enhance productivity.
12. Work productively in teams while using cultural/global competence.

Standards

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

- 01.0 Understand the history of 3-D Animation.
- 02.0 Understand the production process.
- 03.0 Understand intellectual property rights, copyright laws and plagiarism relative to creative assets.
- 04.0 Demonstrate proficiency in computer skills.
- 05.0 Demonstrate knowledge of photo editing software.
- 06.0 Demonstrate knowledge of production writing as it relates to 3-D animation.
- 07.0 Demonstrate knowledge of art direction.
- 08.0 Demonstrate knowledge of character development.
- 09.0 Demonstrate knowledge of storyboarding.
- 10.0 Demonstrate knowledge of animatics.
- 11.0 Demonstrate knowledge of video-editing software.
- 12.0 Demonstrate appropriate voice acting skills.
- 13.0 Demonstrate basic audio production.
- 14.0 Demonstrate knowledge of audio editing software.
- 15.0 Demonstrate knowledge of funding presentations and pitches.
- 16.0 Understand modeling in relation to the production process.
- 17.0 Demonstrate knowledge of animation principles as they relate to modeling.
- 18.0 Demonstrate knowledge of modeling principles.
- 19.0 Demonstrate knowledge of 3-D Animation software.
- 20.0 Demonstrate knowledge of 3-D Animation software navigation.
- 21.0 Demonstrate knowledge of NURBS modeling.
- 22.0 Demonstrate knowledge of polygonal modeling.
- 23.0 Demonstrate knowledge of basic lighting.
- 24.0 Demonstrate knowledge of basic materials and textures.
- 25.0 Demonstrate knowledge of basic animation.
- 26.0 Demonstrate knowledge of basic character setup.
- 27.0 Demonstrate knowledge of basic 3-D rendering.
- 28.0 Understand the role of a texture artist in relation to the production process.
- 29.0 Demonstrate knowledge of color theory.
- 30.0 Demonstrate knowledge of advanced material and texture creation.
- 31.0 Demonstrate knowledge of cloth and hair.
- 32.0 Demonstrate knowledge of cell-shading.
- 33.0 Demonstrate knowledge of texture baking.
- 34.0 Demonstrate knowledge of texture maps.
- 35.0 Demonstrate knowledge of 3-D painting software.
- 36.0 Demonstrate knowledge of rigging.
- 37.0 Demonstrate knowledge of morphing.
- 38.0 Demonstrate knowledge of facial animation.

- 39.0 Demonstrate knowledge of advanced rigging.
- 40.0 Demonstrate knowledge of motion capture systems.
- 41.0 Demonstrate knowledge of motion capture system setup.
- 42.0 Demonstrate knowledge of motion capture preproduction.
- 43.0 Understand the role of a 3-D animator in relation to the production process.
- 44.0 Demonstrate knowledge of advanced animation.
- 45.0 Demonstrate knowledge of motion graphics.
- 46.0 Demonstrate knowledge of animation behaviors and scripting.
- 47.0 Demonstrate knowledge of particle systems.
- 48.0 Demonstrate knowledge of advanced audio production.
- 49.0 Demonstrate knowledge of dynamics (physics).
- 50.0 Demonstrate knowledge of video compositing software.
- 51.0 Demonstrate knowledge of post-production.
- 52.0 Develop a professional portfolio of work.

Florida Department of Education
Student Performance Standards

Course Title: 3-D Animation Technology 1
Course Number: 8718110
Course Credit: 1

Course Description:

This course focuses on the history of 3-D animation, the production process, intellectual property rights, computer skills and animation development.

Abbreviations:

FS-M/LA = Florida Standards for Math/Language Arts
 NGSSS-Sci = Next Generation Sunshine State Standards for Science

Note: This course is pending alignment in the following categories: FS-M/LA.

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
01.0 Understand the history of 3-D Animation – the student will be able to:		
01.01 Understand the history of animation (e.g., 2D, cell, stop motion).		
01.02 Understand the history of computer animation.		
01.03 Identify the advantages and limitations of computer animation.		
01.04 Identify industry and business uses of 3-D animation.		
01.05 Identify 3-D assets and associated end products.		
02.0 Understand the production process – the student will be able to:		
02.01 Identify the job titles associated with animation production.		
02.02 Identify the various tools and equipment used to produce 3-D animation.		
02.03 Understand speed and efficiency concepts.		
02.04 Understand a production pipeline.		
02.05 Identify the departments of an animation studio.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
02.06 Understand the interrelationships between departments.		
02.07 Understand basic communication concepts (e.g., verbal, memos, paperwork).		
02.08 Identify the stages of production.		
02.09 Understand studio terms and jargon.		
02.10 Create and organize production paperwork into production bibles (guidebooks) and prepare for presentations.		
03.0 Understand intellectual property rights, copyright laws and plagiarism relative to creative assets – the student will be able to:		
03.01 Understand the limits and expectations of copyright protection.		
03.02 Understand the concepts of “Fair Use” and Fair Dealing.”		
03.03 Understand the transfer and licensing of creative works.		
03.04 Understand the use of “exclusive rights” to intellectual creations.		
03.05 Demonstrate the use of digital watermarking.		
04.0 Demonstrate proficiency in computer skills – the student will be able to:		SC.912.P.10.15; SC.912.P.10.18
04.01 Identify the computer components relevant to 3-D Animation.		
04.02 Demonstrate understanding of computer performance specifications.		
04.03 Compare and contrast differences between business machines and workstations.		
04.04 Demonstrate best practices of computer safety and ergonomics.		
04.05 Demonstrate understanding of operating systems.		
04.06 Perform storage management operations.		
05.0 Demonstrate knowledge of photo editing software – the student will be able to:		
05.01 Demonstrate understanding of file formats and storage options.		
05.02 Identify parts of the software interface.		
05.03 Demonstrate the ability to use each of the basic tool sets.		
05.04 Demonstrate the ability to import, export and save images.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
05.05 Demonstrate understanding of layers and channels.		
05.06 Demonstrate understanding of filters, effects and plug-ins.		
05.07 Demonstrate understanding of file presets.		
05.08 Demonstrate the ability to select portions of an image for manipulation.		
05.09 Demonstrate the ability to transforms selections and images (crop, scale).		
05.10 Demonstrate the ability to color-correct images (brightness, hue, contrast)		
05.11 Demonstrate the ability to use brushes for image creation and correction.		
05.12 Understand non-destructive and destructive operations.		
05.13 Demonstrate the ability to import, paint and export 3-D objects		
05.14 Demonstrate the basic use of video in photo-editing software.		
06.0 Demonstrate knowledge of production writing as it relates to 3-D animation – the student will be able to:		
06.01 Understand the job of a scriptwriter.		
06.02 Identify target audiences, markets, and demographics.		
06.03 Identify the elements of a script.		
06.04 Develop the intended message of a script.		
06.05 Demonstrate the ability to write a treatment.		
06.06 Demonstrate the ability to write a professionally formatted script.		
06.07 Identify the genre of a story.		
06.08 Define the characters and setting for a story.		
06.09 Demonstrate the ability to breakdown a script into production elements (e.g., cast, props).		
07.0 Demonstrate knowledge of art direction – the student will be able to:		
07.01 Develop the overall visual appearance of an animation.		
07.02 Demonstrate the ability to create moods with style.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
07.03 Determine the geographic location and time period of a story.		
07.04 Understand the importance of art direction as it pertains to the intended message.		
07.05 Understand the use of color in art direction.		
07.06 Document the technical aspects of art direction.		
07.07 Perform assignments in a professional manner and according to industry standards.		
08.0 Demonstrate knowledge of character development – the student will be able to:		
08.01 Demonstrate an understanding of character profiles.		
08.02 Demonstrate the ability to develop character résumés/profiles.		
08.03 Develop the look and design for a character that reflects the art direction.		
08.04 Understand the technical challenges/limitations of a character.		
09.0 Demonstrate knowledge of storyboarding – the student will be able to:		
09.01 Demonstrate understanding of visual storytelling and how storyboards are used during production.		
09.02 Identify common aspect ratios and demonstrate how to calculate ratios.		
09.03 Demonstrate understanding of camera framing and camera movement.		
09.04 Develop a visual style using the art direction.		
09.05 Break down a script into the various camera shots and character actions.		
09.06 Demonstrate understanding of perspective and depth of field.		
09.07 Demonstrate knowledge of lighting and color use.		
09.08 Demonstrate the ability to sketch a storyboard (including characters).		
09.09 Demonstrate the ability to use storyboarding software or illustration software.		
10.0 Demonstrate knowledge of animatics – the student will be able to:		
10.01 Demonstrate understanding of animatics and how they are used during production.		
10.02 Identify the different types of animatics.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
10.03 Demonstrate understanding of shot timing.		
10.04 Break down a script into the various camera shots and character actions.		
10.05 Understand the concept of a working print.		
11.0 Demonstrate knowledge of video-editing software – the student will be able to:		
11.01 Demonstrate understanding of file formats and storage options.		
11.02 Identify parts of the software interface.		
11.03 Demonstrate the ability to use each of the basic tool sets.		
11.04 Demonstrate the ability to import, export and save video.		
11.05 Demonstrate understanding of layers and compositing.		
11.06 Demonstrate understanding of filters, effects and plug-ins.		
11.07 Demonstrate understanding of file presets.		
11.08 Demonstrate understanding of rendering processes.		
11.09 Demonstrate the ability to transform video (crop, scale).		
11.10 Demonstrate the ability to color-correct images (brightness, hue, contrast).		
11.11 Demonstrate the ability to use brushes for image creation and correction.		
11.12 Understand non-destructive and destructive operations.		
11.13 Demonstrate the compositing integration of rendered 3-D animation with video.		
12.0 Demonstrate appropriate voice acting skills – the student will be able to:		
12.01 Demonstrate an understanding of how to mark a script for voice-over (VO).		
12.02 Demonstrate the ability to read aloud in a professional manner.		
12.03 Demonstrate an understanding of the use of phonemes and facial morphs for lip-sync animation.		
12.04 Understand the concept of voice acting and playing a role while speaking.		
12.05 Perform assignments in a professional manner and according to industry standards.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
13.0 Demonstrate basic audio production – the student will be able to:		
13.01 Understand the concept and mechanics of recording environment set-up.		
13.02 Demonstrate understanding of digital audio recording hardware.		
13.03 Demonstrate understanding of the proper use of microphones.		
13.04 Demonstrate knowledge of audio codecs and media.		
13.05 Understand the history of Foley and sound effects production.		
14.0 Demonstrate knowledge of audio editing software – the student will be able to:		
14.01 Demonstrate understanding of file formats and storage options.		
14.02 Identify parts of the software interface.		
14.03 Demonstrate the ability to use each of the basic tool sets.		
14.04 Demonstrate the ability to import, export and save audio.		
14.05 Demonstrate the ability to utilize multiple tracks.		
14.06 Demonstrate understanding of filters, effects and plug-ins.		
14.07 Demonstrate understanding of file presets.		
14.08 Demonstrate understanding of audio rendering processes.		
14.09 Demonstrate the ability to edit, cut, and delete.		
14.10 Understand non-destructive and destructive operations.		
15.0 Demonstrate knowledge of funding presentations and pitches – the student will be able to:		
15.01 Understand the network associated with product distribution.		
15.02 Identify the job titles and roles of distributors.		
15.03 Identify potential markets, target audiences, and products.		
15.04 Effectively convey a message by utilizing the available presentation software and/or other methods.		
15.05 Develop a script of talking points.		

CTE Standards and Benchmarks	FS-M/LA	NGSS-Sci
15.06 Effectively communicate a message or pitch.		

Florida Department of Education
Student Performance Standards

Course Title: 3-D Animation Technology 2
Course Number: 8718120
Course Credit: 1

Course Description:

This course focuses on 3-D animation modeling processes. Students learn animation modeling principles, NURBS and polygonal modeling, and utilize the software related to 3-D animation.

Abbreviations:

FS-M/LA = Florida Standards for Math/Language Arts
NGSSS-Sci = Next Generation Sunshine State Standards for Science

Note: This course is pending alignment in the following categories: FS-M/LA.

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
16.0 Understand modeling in relation to the production process – the student will be able to:		
16.01 Define <i>modeling</i> as a process.		
16.02 Define the role of a modeler.		
16.03 Identify job titles associated with modeler.		
16.04 Identify modeling in the production pipeline.		
17.0 Demonstrate knowledge of animation principles as they relate to modeling – the student will be able to:		
17.01 Demonstrate an understanding of the principle of <i>squash and stretch</i> .		
17.02 Demonstrate an understanding of the principle of <i>anticipation</i> .		
17.03 Demonstrate an understanding of the principle of <i>staging</i> .		
17.04 Demonstrate an understanding of the principles of <i>straight ahead action</i> and <i>pose-to-pose</i> .		
17.05 Demonstrate an understanding of the principles of <i>follow through</i> and <i>overlapping action</i> .		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
17.06 Demonstrate an understanding of the principle of <i>ease in / ease out</i> .		
17.07 Demonstrate an understanding of the principle of <i>arcs</i> .		
17.08 Demonstrate an understanding of the principle of <i>secondary action</i> .		
17.09 Demonstrate an understanding of the principle of <i>timing</i> .		
17.10 Demonstrate an understanding of the principle of <i>exaggeration</i> .		
17.11 Demonstrate an understanding of the principle of <i>solid drawing</i> .		
17.12 Demonstrate an understanding of the principle of <i>appeal</i> .		
18.0 Demonstrate knowledge of modeling principles – the student will be able to:		
18.01 Understand 3-D construction theory.		
18.02 Demonstrate understanding of primitives and parametric modeling.		
18.03 Demonstrate an understanding of NURBS, splines, and polygonal modeling.		
18.04 Demonstrate the ability to use reference images and files while modeling.		
19.0 Demonstrate knowledge of 3-D Animation software – the student will be able to:		
19.01 Identify the computer requirements for 3-D animation software.		
19.02 Compare and contrast available 3-D animation software options.		
19.03 Identify file formats and protocols.		
19.04 Demonstrate an understanding of naming conventions.		
19.05 Develop software and file backup plans.		
19.06 Identify common icons within the software.		
19.07 Demonstrate the use of keyboard shortcuts.		
19.08 Demonstrate the use of a three-button mouse.		
20.0 Demonstrate knowledge of 3-D Animation software navigation – the student will be able to:		
20.01 Identify the main windows of a 3-D animation software program.		

CTE Standards and Benchmarks	FS-M/LA	NGSS-Sci
20.02 Identify common window layouts.		
20.03 Identify tool icons within the software.		
20.04 Understand the significance of keyboard shortcut use and efficiency.		
20.05 Demonstrate the use of keyboard shortcuts.		
20.06 Demonstrate an understanding of the Euclidean Geometry Model (x-y-z coordinate system).		
20.07 Demonstrate an understanding of attribute managers.		
20.08 Demonstrate an understanding of layers.		
20.09 Navigate the modeling window using pan, rotate, and zoom controls.		
20.10 Demonstrate knowledge of selection tools (e.g., lasso, loop).		
20.11 Utilize wireframe, Gouraud shading, lines, boxes, modes.		
20.12 Demonstrate use of selection sets.		
20.13 Undo and redo an action within the program.		
20.14 Locate and utilize the help menu.		
21.0 Demonstrate knowledge of NURBS modeling – the student will be able to:		
21.01 Demonstrate an understanding of points, vertices, edges, and polygons.		
21.02 Demonstrate an understanding of poly-count.		
21.03 Demonstrate an understanding of primitives.		
21.04 Define <i>parametric primitives</i> .		
21.05 Locate the properties, attributes, and coordinates of an object.		
21.06 Demonstrate understanding of non-uniform rational basis splines (NURBS).		
21.07 Demonstrate understanding of splines and generators (e.g., extrude, lathe, sweep).		
21.08 Understand the use of hierarchy.		
21.09 Demonstrate an understanding of Boolean Objects.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
21.10 Demonstrate an understanding of Null Objects.		
21.11 Demonstrate an understanding of scene management (hiding and un-hiding).		
21.12 Demonstrate an understanding of arrays.		
22.0 Demonstrate knowledge of polygonal modeling – the student will be able to:		
22.01 Demonstrate an understanding of N-gons.		
22.02 Demonstrate an understanding of subdivision.		
22.03 Demonstrate basic polygon editing and manipulation.		
22.04 Demonstrate knowledge of point management (location).		
22.05 Demonstrate the ability to create polygonal models from points.		
22.06 Demonstrate an understanding of cutting/division tools.		
22.07 Demonstrate an understanding of extruders.		
22.08 Demonstrate an understanding of symmetry.		
22.09 Demonstrate an understanding of hyper-NURBS.		
22.10 Demonstrate an understanding of basic deformers (e.g., bend, twist, melt).		

Florida Department of Education
Student Performance Standards

Course Title: 3-D Animation Technology 3
Course Number: 8718130
Course Credit: 1

Course Description:

Students learn about 3-D animation lighting, the use of basic materials and textures, character set-up, and 3-D animation rendering processes.

Abbreviations:

FS-M/LA = Florida Standards for Math/Language Arts
NGSSS-Sci = Next Generation Sunshine State Standards for Science

Note: This course is pending alignment in the following categories: FS-M/LA.

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
23.0 Demonstrate knowledge of basic lighting – the student will be able to:		SC.912.P.10.18; SC.912.P.10.20
23.01 Compare and contrast real lighting with 3-D lighting.		
23.02 Demonstrate an understanding 3-point lighting.		
23.03 Demonstrate an understanding of low-key and high-key lighting.		
23.04 Use “include/exclude” commands to target light on objects.		
23.05 Demonstrate use of negative intensity.		
23.06 Demonstrate an understanding of the hierarchy of lights.		
23.07 Demonstrate an understanding of area lights.		
23.08 Demonstrate an understanding of volumetric lights.		
23.09 Demonstrate an understanding of radiosity/global illumination.		
23.10 Demonstrate an understanding of ambient occlusion.		
23.11 Demonstrate an understanding of HDRl lighting.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
23.12 Demonstrate an understanding of how light settings will affect render times.		
24.0 Demonstrate knowledge of basic materials and textures – the student will be able to:		SC.912.P.8.1; SC.912.P.8.2; SC.912.P.10.18; SC.912.P.10.20
24.01 Demonstrate an understanding of material and texture storage.		
24.02 Apply textures to an object.		
24.03 Demonstrate an understanding of procedural shaders.		
24.04 Demonstrate an understanding of channels.		
24.05 Adjust the transparency, luminance, and reflection of a material.		
24.06 Demonstrate an understanding of displacement maps.		
24.07 Demonstrate an understanding of bump maps.		
24.08 Demonstrate knowledge of material projections.		
24.09 Demonstrate an understanding of UV mapping.		
24.10 Demonstrate an understanding of 3-D painting.		
24.11 Understand how light affects the look of materials.		
24.12 Understand how camera angles affect the look of materials.		
25.0 Demonstrate knowledge of basic animation – the student will be able to:	MAFS.912.S-IC.2	SC.912.N.3.5; SC.912.N.1.4
25.01 Apply animation principles to object animation.		
25.02 Demonstrate an understanding of animation timelines.		
25.03 Demonstrate an understanding of key framing.		
25.04 Demonstrate an understanding of F-curves.		
25.05 Record and edit key frames.		
25.06 Demonstrate the use of controllers.		
25.07 Demonstrate an understanding of ease in/out.		

CTE Standards and Benchmarks	FS-M/LA	NGSS-Sci
25.08 Demonstrate an understanding of camera animation.		
25.09 Render low-quality reference animation.		
26.0 Demonstrate knowledge of basic character setup – the student will be able to:		SC.912.L.14.13; SC.912.L.14.14; SC.912.L.14.16; SC.912.L.14.17; SC.912.L.14.19
26.01 Compare and contrast rigging approaches and styles.		
26.02 Demonstrate an understanding of the rig as it relates to the model.		
26.03 Demonstrate an understanding of mesh morphing.		
26.04 Demonstrate an understanding of skeletal systems.		
26.05 Demonstrate an understanding of bones and joints.		
26.06 Demonstrate an understanding of bone/joint hierarchies and naming conventions.		
26.07 Demonstrate an understanding of controllers.		
26.08 Demonstrate an understanding of spline inverse kinematics (IK).		
26.09 Demonstrate an understanding of kinematic chains.		
26.10 Demonstrate an understanding of skins and weights.		
26.11 Demonstrate the ability to create a visual selector for the rig.		
27.0 Demonstrate knowledge of basic 3-D rendering – the student will be able to:		SC.912.P.10.18; SC.912.P.10.20
27.01 Demonstrate an understanding of processor, hardware, and software rendering techniques.		
27.02 Determine the final render format.		
27.03 Demonstrate an understanding of basic render settings.		
27.04 Demonstrate understanding of title safe, action safe, and render safe.		
27.05 Select the range of frames to be rendered.		
27.06 Demonstrate an understanding of global illumination (radiosity) render settings.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
27.07 Demonstrate an understanding of anti-aliasing.		
27.08 Demonstrate an understanding of net rendering.		
27.09 Demonstrate an understanding of alpha channels.		
27.10 Render animation as a movie or image sequence.		
27.11 Compile image sequences into a movie.		
27.12 Demonstrate an understanding of the benefits, purpose and workflow of multi-pass rendering.		
27.13 Demonstrate an understanding of the batch render process.		

Florida Department of Education
Student Performance Standards

Course Title: 3-D Animation Technology 4
Course Number: 8718140
Course Credit: 1

Course Description:

Students explore and utilize advanced animation techniques.

Abbreviations:

FS-M/LA = Florida Standards for Math/Language Arts

NGSSS-Sci = Next Generation Sunshine State Standards for Science

Note: This course is pending alignment in the following categories: FS-M/LA.

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
28.0 Understand the role of a texture artist in relation to the production process – the student will be able to:		SC.912.P.10.18; SC.912.P.10.20; SC.912.P.8.1; SC.912.P.8.2
28.01 Define <i>texturing</i> as a process.		
28.02 Define the role of a texture artist.		
28.03 Identify job titles associated with a texture artist.		
28.04 Identify texture creation in the production pipeline.		
28.05 Demonstrate knowledge of the differences between textures and shaders.		
28.06 Demonstrate an understanding of texture projection methods.		
28.07 Demonstrate the application of UV coordinates to texture mapping.		
28.08 Demonstrate the round-trip integration of photo editing software and a 3-D host for texture development.		
28.09 Demonstrate how to link texture and shade properties to object movement via either visual or scripted programming relationships.		
29.0 Demonstrate knowledge of color theory – the student will be able to:		SC.912.P.10.18; SC.912.P.10.20

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
29.01 Demonstrate an understanding of additive and subtractive color mixtures.		
29.02 Demonstrate an understanding of hue, saturation, and brightness.		
29.03 Demonstrate an understanding of complementary colors and composition.		
29.04 Identify warm and cool colors.		
29.05 Demonstrate an understanding of the psychology of color influence.		
30.0 Demonstrate knowledge of advanced material and texture creation – the student will be able to:		SC.912.P.10.18; SC.912.P.10.20; SC.912.P.8.1; SC.912.P.8.2
30.01 Determine required materials and textures for a model based on production design sheets and reference images.		
30.02 Determine the material and texture properties to create.		
30.03 Select an appropriate style (e.g., realistic, hyper-real, simplified).		
30.04 Determine the appropriate color pallets to use.		
30.05 Determine appropriate image resolution and file format for use in 3-D applications.		
30.06 Demonstrate knowledge of material and texture creation techniques and approaches.		
30.07 Identify the tools and software used to create materials and textures.		
30.08 Acquire raw texture images from digital stills or scans.		
30.09 Create tiled textures using photo-editing software.		
31.0 Demonstrate knowledge of cloth and hair – the student will be able to:		SC.912.N.1.4; SC.912.N.3.5; SC.912.P.8.2; SC.912.P.10.18; SC.912.P.10.20
31.01 Determine cloth and/or hair requirements based on production design sheets and reference images.		
31.02 Define the physical properties associated with cloth and hair.		
31.03 Demonstrate knowledge of cloth and hair toolsets.		
31.04 Determine appropriate materials to use with hair.		

CTE Standards and Benchmarks	FS-M/LA	NGSS-Sci
31.05 Demonstrate knowledge of hair manipulation and management.		
31.06 Demonstrate knowledge of cloth and hair lighting techniques.		
31.07 Demonstrate knowledge of the dynamic simulation parameters required to make cloth and hair perform to production requirements.		
31.08 Demonstrate knowledge of how cloth and hair interact with other objects.		
32.0 Demonstrate knowledge of cell-shading – the student will be able to:		SC.912.P.10.18; SC.912.P.10.20; SC.912.N.3.5
32.01 Understand the history of cell-shading.		
32.02 Determine the appropriate use of cell-shading techniques.		
32.03 Determine cell-shading requirements needed for a model based on production design sheets and reference images.		
32.04 Demonstrate knowledge of lighting techniques used with cell-shading.		
32.05 Determine appropriate render settings for cell-shading.		
32.06 Determine the appropriate materials and shaders to use with cell-shading.		
33.0 Demonstrate knowledge of texture baking – the student will be able to:		
33.01 Describe the advantages of baking textures.		
33.02 Determine the appropriate use of baked textures.		
33.03 Demonstrate texture baking procedures.		
33.04 Export models with baked textures.		
33.05 Determine the appropriate render settings needed for baked textures.		
34.0 Demonstrate knowledge of texture maps – the student will be able to:		SC.912.P.10.18; SC.912.P.10.20; SC.912.N.3.5
34.01 Define the properties of displacement, bump, and normal maps.		
34.02 Determine the appropriate texture mapping requirements for a model based on production design sheets and reference images.		
34.03 Demonstrate knowledge of displacement map placement tools and techniques.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
34.04 Demonstrate knowledge of bump map tools and techniques.		
34.05 Demonstrate knowledge of normal map tools and techniques.		
35.0 Demonstrate knowledge of 3-D painting software – the student will be able to:		SC.912.P.10.18; SC.912.P.10.20; SC.912.N.3.5
35.01 Identify available 3-D paint programs.		
35.02 Demonstrate knowledge of UV mapping tools.		
35.03 Prepare a UV map for export for use with photo-editing software.		
35.04 Demonstrate knowledge of 3-D painting tools within 3-D animation software.		
35.05 Apply a painted image map to a model.		

Florida Department of Education
Student Performance Standards

Course Title: 3-D Animation Technology 5
Course Number: 8718150
Course Credit: 1

Course Description:

This course focuses on rigging, morphing and facial animation.

Abbreviations:

FS-M/LA = Florida Standards for Math/Language Arts
 NGSSS-Sci = Next Generation Sunshine State Standards for Science

Note: This course is pending alignment in the following categories: FS-M/LA.

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
36.0 Demonstrate knowledge of rigging – the student will be able to:		SC.912.N.3.5; SC.912.L.14.13; SC.912.L.14.14; SC.912.L.14.16; SC.912.L.14.17; SC.912.L.14.19
36.01 Define <i>rigging</i> as a process.		
36.02 Define the role of a rigger.		
36.03 Identify the job titles associated with a rigger.		
36.04 Identify rigging creation in the production pipeline.		
36.05 Demonstrate knowledge of forward kinematics versus inverse kinematics.		
36.06 Demonstrate an understanding of the joint weighting process.		
36.07 Demonstrate the proper hierarchical structure of goals and nulls to construct effective control objects.		
37.0 Demonstrate knowledge of morphing – the student will be able to:		SC.912.N.3.5; SC.912.L.14.13; SC.912.L.14.14; SC.912.L.14.16;

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
		SC.912.L.14.17; SC.912.L.14.19
37.01 Define <i>morphing</i> as it relates to animation.		
37.02 Demonstrate knowledge of morphing tools.		
37.03 Demonstrate knowledge of model meshes.		
37.04 Define the model area to be morphed.		
37.05 Create morph target points.		
37.06 Demonstrate knowledge of controllers and relational morphs (driver, driven).		
37.07 Demonstrate knowledge of rotational morphs.		
37.08 Demonstrate knowledge of key frame animation and morph tags.		
38.0 Demonstrate knowledge of facial animation – the student will be able to:		SC.912.N.3.5; SC.912.L.14.13; SC.912.L.14.14; SC.912.L.14.16; SC.912.L.14.17; SC.912.L.14.19
38.01 Demonstrate knowledge of animation-related facial morphing techniques.		
38.02 Demonstrate knowledge of phoneme-viseme principles for lip synchronization.		
38.03 Apply facial expression animation to complement lip synchronization.		
38.04 Break down a script into a sound chart.		
38.05 Create a set of controls for each sound and expression.		
39.0 Demonstrate knowledge of advanced rigging – the student will be able to:		SC.912.N.3.5; SC.912.L.14.13; SC.912.L.14.14; SC.912.L.14.16; SC.912.L.14.17; SC.912.L.14.19
39.01 Determine uses for advanced rigging.		
39.02 Demonstrate knowledge of advanced rigging tools.		
39.03 Prepare a rigged model for animation.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
39.04 Demonstrate knowledge of advanced scripting relative to rigging.		
39.05 Create complex rigs for greater precision and control.		
39.06 Demonstrate knowledge of deformers.		
39.07 Demonstrate knowledge of motion capture rigging.		
39.08 Determine necessary joint/bone hierarchy for motion capture rigging.		
39.09 Apply pre-captured motion data to a motion capture rig.		

Florida Department of Education
Student Performance Standards

Course Title: 3-D Animation Technology 6
Course Number: 8718160
Course Credit: 1

Course Description:

This course focuses on motion capture systems, system setup, and the pre-production process.

Abbreviations:

FS-M/LA = Florida Standards for Math/Language Arts
 NGSSS-Sci = Next Generation Sunshine State Standards for Science

Note: This course is pending alignment in the following categories: FS-M/LA.

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
40.0 Demonstrate knowledge of motion capture systems – the student will be able to:		SC.912.L.14.13; SC.912.L.14.14; SC.912.L.14.16; SC.912.L.14.17; SC.912.L.14.19; SC.912.P.10.18; SC.912.P.10.20
40.01 Demonstrate knowledge of the history of motion capture.		
40.02 Demonstrate an awareness of emerging technologies in the industry.		
40.03 Demonstrate understanding of motion capture for 3-D production.		
40.04 Define the role of a motion capture technician.		
40.05 Demonstrate understanding of optical, magnetic, and mechanical systems.		
40.06 Demonstrate understanding of software-based or simulated motion capture systems.		
40.07 Demonstrate understanding of the motion capture production pipeline.		
41.0 Demonstrate knowledge of motion capture system setup – the student will be able to:		SC.912.L.14.13; SC.912.L.14.14; SC.912.L.14.16;

CTE Standards and Benchmarks	FS-M/LA	NGSS-Sci
		SC.912.L.14.17; SC.912.L.14.19; SC.912.P.10.18; SC.912.P.10.20
41.01 Determine the capture volume based on available space and cameras.		
41.02 Demonstrate understanding of XYZ perimeters in lab orientation.		
41.03 Demonstrate understanding of motion capture computer hardware requirements and software security dongles.		
41.04 Demonstrate understanding of the tools and instruments specific to motion capture.		
41.05 Demonstrate the ability to create individual optical markers and arrays using optical tape and Velcro strapping.		
42.0 Demonstrate knowledge of motion capture preproduction – the student will be able to:		SC.912.L.14.13; SC.912.L.14.14; SC.912.L.14.16; SC.912.L.14.17; SC.912.L.14.19; SC.912.P.10.18; SC.912.P.10.20
42.01 Identify the use of motion capture as it relates to a production plan.		
42.02 Mark a script and shot list for motion capture.		
42.03 Understand the role of motion capture talent/actors.		
42.04 Rehearse the performance with talent.		
42.05 Identify the necessary captured performance props.		
42.06 Determine real-time video needs.		

Florida Department of Education
Student Performance Standards

Course Title: 3-D Animation Technology 7
Course Number: 8718170
Course Credit: 1

Course Description:

This course focuses on advanced 3-D animation.

Abbreviations:

FS-M/LA = Florida Standards for Math/Language Arts
 NGSSS-Sci = Next Generation Sunshine State Standards for Science

Note: This course is pending alignment in the following categories: FS-M/LA.

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
43.0 Understand the role of a 3-D animator in relation to the production process – the student will be able to:		
43.01 Define <i>animation</i> as a process.		
43.02 Define the role of an animator.		
43.03 Identify job titles associated with an animator.		
43.04 Identify animation in the production pipeline.		
44.0 Demonstrate knowledge of advanced animation – the student will be able to:		SC.912.L.14.13; SC.912.L.14.14; SC.912.L.14.16; SC.912.L.14.17; SC.912.L.14.19; SC.912.N.1.1; SC.912.N.1.6; SC.912.N.1.2; SC.912.N.1.4; SC.912.N.1.6; SC.912.N.3.5
44.01 Demonstrate knowledge of how nondestructive deformers affect animation.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
44.02 Demonstrate knowledge of how muscle deformers integrate with a character rig.		
44.03 Demonstrate knowledge of transforms and animation transfers from one object or object hierarchy to another.		
45.0 Demonstrate knowledge of motion graphics – the student will be able to:		
45.01 Demonstrate knowledge of 3-D animated motion graphics.		
45.02 Demonstrate knowledge of motion graphics tools and techniques.		
45.03 Demonstrate knowledge of integrated dynamics to simulate gravitational and collision effects.		
45.04 Demonstrate the integration of standard animation techniques to drive motion graphics elements based on node-based visual programming.		
45.05 Demonstrate an applied working knowledge of motion graphics for broadcast application in TV show opens and commercials.		
46.0 Demonstrate knowledge of animation behaviors and scripting – the student will be able to:		
46.01 Determine appropriate use of behaviors and automated animation.		
46.02 Demonstrate the ability to apply behavior to an object.		
46.03 Demonstrate the ability to apply multiple behaviors using node or visual systems.		
46.04 Demonstrate the ability to use object-oriented programming language to create scripts.		
46.05 Demonstrate understanding of the scripting console and commands.		
47.0 Demonstrate knowledge of particle systems – the student will be able to:		SC.912.N.1.4; SC.912.N.3.5; SC.912.N.1.1; SC.912.1.6; SC.912.N.1.2; SC.912.P.10.18; SC.912.P.10.20; SC.912.P.12.5; SC.912.P.12.2; SC.912.P.12.4
47.01 Demonstrate understanding of particle emitters.		
47.02 Prepare objects to be emitted.		
47.03 Determine the direction of emission and coordinate.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
47.04 Determine birthrate and lifetime.		
47.05 Determine scale, speed, and rotation.		
47.06 Demonstrate the ability to use animated particles.		
47.07 Demonstrate the ability to create smoke, fire, and sparks using emitters and materials.		
47.08 Apply dynamics to an emitter, including wind/gravity.		
47.09 Demonstrate use of key frame animation or triggers.		
48.0 Demonstrate knowledge of advanced audio production – the student will be able to:		
48.01 Edit and export sound effects for use in video-editing software.		
48.02 Demonstrate the ability to place audio in 3-D space using 3-D animation software.		
49.0 Demonstrate knowledge of dynamics (physics) – the student will be able to:		SC.912.N.1.4; SC.912.N.3.5; SC.912.N.1.1; SC.912.1.6; SC.912.N.1.2; SC.912.P.10.18; SC.912.P.10.20; SC.912.P.12.5; SC.912.P.12.2; SC.912.P.12.4
49.01 Demonstrate a basic understanding of physics principles (e.g., mass, velocity, collision).		
49.02 Determine when to use physics instead of key frame animation.		
49.03 Apply physics tools and commands to models in a simulation.		
49.04 Demonstrate an understanding of rigid and soft bodies.		
49.05 Demonstrate an understanding of forces (e.g., gravity, drag, wind).		
49.06 Demonstrate an understanding of collision detection.		
50.0 Demonstrate knowledge of video compositing software – the student will be able to:		SC.912.N.1.4; SC.912.N.3.5; SC.912.N.1.1; SC.912.1.6; SC.912.N.1.2;

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
		SC.912.P.10.18; SC.912.P.10.20; SC.912.P.12.5; SC.912.P.12.2; SC.912.P.12.4;
50.01 Demonstrate understanding of file formats and storage options.		
50.02 Identify parts of the software interface.		
50.03 Demonstrate the ability to use each of the basic tool sets.		
50.04 Demonstrate the ability to import files and videos to be composited.		
50.05 Demonstrate understanding of layers and compositing.		
50.06 Demonstrate understanding of filters, effects and plug-ins.		
50.07 Demonstrate understanding of motion paths.		
50.08 Demonstrate understanding of lighting effects.		
50.09 Demonstrate understanding of rendering processes.		
50.10 Demonstrate the ability to mask video.		
50.11 Demonstrate the ability to color-correct video (e.g., brightness, hue, contrast).		
50.12 Demonstrate the ability to use vector and color keying tools.		
50.13 Demonstrate understanding of particle systems.		
50.14 Demonstrate understanding of time correction.		
50.15 Demonstrate the ability to export final video to use with video-editing software.		
50.16 Demonstrate the ability to prepare the 3-D scene for compositing using alpha channel setting in the 3-D host as well as object buffers that will be assigned video sources in the compositing software.		
50.17 Demonstrate the ability to add camera and lighting positions and rotations for use in the compositing software.		
51.0 Demonstrate knowledge of post-production – the student will be able to:		
51.01 Import composited video into the timeline.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
51.02 Import final audio into the timeline.		
51.03 Edit video using the animatic as a reference.		
51.04 Export a video for use in websites, DVDs and other media formats.		
51.05 Encode and assemble a DVD for distribution.		
52.0 Develop a professional portfolio of work – the student will be able to:		
52.01 Identify the elements of a professional portfolio and résumé.		
52.02 Examine and determine work samples to include in a portfolio and résumé.		
52.03 Gather illustrations, audio, video, and work history details to include in a portfolio and résumé.		
52.04 Understand web-based portfolio distribution.		
52.05 Determine formatting for the portfolio and résumé.		
52.06 Produce a résumé for final review.		

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 occupational standards and benchmarks outlined in this secondary program correlate to the standards and benchmarks of the postsecondary program with the same Classification of Instructional Programs (CIP) number.

MyCareerShines is an interactive resource to assist students in identifying their ideal career and to enhance preparation for employment. Teachers are encouraged to integrate this resource into the program curriculum to meet the employability goals for each student.

Career and Technical Student Organization (CTSO)

SkillsUSA is the intercurricular career and technical student organization(s) 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.

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 Occupational Completion Point (OCP) or a Modified Occupational Completion Point (MOCP). 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 an OCP/MOCP. The student should work on different competencies and new applications of competencies each year toward completion of the OCP/MOCP. 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: Telecommunications Technology
Program Type: Career Preparatory
Career Cluster: Arts, A/V Technology and Communication

Secondary – Career Preparatory

Program Number	8730200
CIP Number	0647010301
Grade Level	9-12
Standard Length	4 credits
Teacher Certification	Refer to the <u>Program Structure</u> section.
CTSO	SkillsUSA
SOC Codes (all applicable)	49-2022 – Telecommunications Equipment Installers and Repairers, Except Line Installers

Purpose

The purpose of this program is to prepare students for employment or advanced training in a variety of occupations in the Telecommunications industry.

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 Arts, A/V Technology and Communication 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 Arts, A/V Technology and Communication career cluster.

The course content includes, but is not limited to, installation, maintenance and servicing of telecommunications systems, and the diagnosis and correction of operational problems in telecommunications arising from mechanical, electrical, electronics and hardware malfunctions.

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 three occupational completion points: (A) Telecommunications Installer, (B) Telecommunications Installation and Repair Specialist, (C) Telecommunications Technician.

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:

OCP	Course Number	Course Title	Teacher Certification	Length	SOC Code	Level	Graduation Requirement
A	8730210	Telecommunications Technology 1	COMP SVC 7G	1 credit	49-2022	2	
B	8730220	Telecommunications Technology 2	ELECTRICAL @7 7G	1 credit	49-2022	2	
C	8730230	Telecommunications Technology 3	ELECTRONIC @7 7G	1 credit	49-2022	2	
	8730240	Telecommunications Technology 4	TELCOM 7G	1 credit		2	

(Graduation Requirement Abbreviations- EQ= Equally Rigorous Science, PA= Practical Arts, EC= Economics)

Florida Standards for Technical Subjects

Florida Standards (FS) for English Language Arts and Literacy in History/Social Studies, Science, and Technical Subjects are the critical reading and writing literacy standards designed for grade 6 and above. These standards are predicated on teachers of history/social studies, science, and technical subjects using their content area expertise to help students meet the particular challenges of reading, writing, speaking, listening, and language in their respective fields. The FS for Mathematical Practices are designed for grades K-12 and describe varieties of expertise that educators at all levels should seek to develop in their students. These practices rest on important “processes and proficiencies” with longstanding importance in mathematics education.

Instructors must incorporate the Florida Standards for Technical Subjects and Mathematical Practices throughout instruction of this CTE program.

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.

Common Career Technical Core – Career Ready Practices

Career Ready Practices describe the career-ready skills that educators should seek to develop in their students. These practices are not exclusive to a Career Pathway, program of study, discipline or level of education. Career Ready Practices should be taught and reinforced in all career exploration and preparation programs with increasingly higher levels of complexity and expectation as a student advances through a program of study.

1. Act as a responsible and contributing citizen and employee.
2. Apply appropriate academic and technical skills.
3. Attend to personal health and financial well-being.
4. Communicate clearly, effectively and with reason.
5. Consider the environmental, social and economic impacts of decisions.
6. Demonstrate creativity and innovation.
7. Employ valid and reliable research strategies.
8. Utilize critical thinking to make sense of problems and persevere in solving them.
9. Model integrity, ethical leadership and effective management.
10. Plan education and career path aligned to personal goals.
11. Use technology to enhance productivity.
12. Work productively in teams while using cultural/global competence.

Standards

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

- 01.0 Explain and practice workplace safety.
- 02.0 Demonstrate basic work practices.
- 03.0 Demonstrate the use of safety equipment.
- 04.0 Inspect tools and equipment.
- 05.0 Inspect test equipment.
- 06.0 Explain industry code of conduct.
- 07.0 Demonstrate traffic control.
- 08.0 Demonstrate pole climbing.
- 09.0 Explain roadside safety.
- 10.0 Explain electrical hazards.
- 11.0 Perform data line safety checks.
- 12.0 Demonstrate proficiency in making electrical connections, splices and basic field repair.
- 13.0 Troubleshoot and repair telecommunications system wiring.
- 14.0 Demonstrate proficiency in customer relations.
- 15.0 Demonstrate proficiency in basic DC circuitry.
- 16.0 Demonstrate appropriate understanding of basic math.
- 17.0 Demonstrate proficiency in the use of tools and test equipment used in the telecommunications industry.
- 18.0 Demonstrate science knowledge and skills.
- 19.0 Demonstrate proficiency in basic AC circuitry.
- 20.0 Analyze technical data associated with cable validation and fault location.
- 21.0 Install, repair, terminate and test network cabling.
- 22.0 Demonstrate advanced skills in test equipment usage to locate faults.
- 23.0 Demonstrate advanced cable repair techniques. (Optional)
- 24.0 Demonstrate usage of test equipment to validate network and telecommunications cabling systems.
- 25.0 Demonstrate a basic understanding of computer system architecture.
- 26.0 Demonstrate proficiency in peripheral equipment.
- 27.0 Demonstrate proficiency in electronic information exchange.
- 28.0 Demonstrate proficiency in site requirements and considerations.
- 29.0 Use tables and charts.
- 30.0 Prepare worksite plans.
- 31.0 Demonstrate proficiency in twisted pair design.

**Florida Department of Education
Student Performance Standards**

Course Title: Telecommunication Technology 1
Course Number: 8730210
Course Credit: 1

Course Description:

This course covers competencies in safety, tools, traffic control, pole climbing, DC circuits, troubleshooting, and customer service.

Abbreviations:

FS-M/LA = Florida Standards for Math/Language Arts
 NGSSS-Sci = Next Generation Sunshine State Standards for Science

Note: This course is pending alignment in the following categories: FS-M/LA and NGSSS-Sci.

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
01.0 Explain and practice workplace safety – the student will be able to:		
01.01 Demonstrate office safety.		
01.02 Demonstrate safety outside of the office.		
01.03 Explain fiber optics safety.		
01.04 Demonstrate safety for splicing.		
01.05 Demonstrate or explain bucket truck safety. (Optional)		
02.0 Demonstrate basic work practices – the student will be able to:		
02.01 Demonstrate good work attitudes.		
02.02 Explain work and business ethics.		
02.03 Explain general code of conduct.		
03.0 Demonstrate the use of safety equipment – the student will be able to:		
03.01 Correctly use personal safety equipment used in the telecommunications industry.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
03.02 Explain the hazards associated with the telecommunications industry.		
04.0 Inspect tools and equipment – the student will be able to:		
04.01 Safety-inspect support equipment.		
04.02 Safety-inspect tools.		
05.0 Inspect test equipment – the student will be able to:		
05.01 Evaluate and inspect test equipment.		
06.0 Explain industry code of conduct – the student will be able to:		
06.01 Explain the purpose of a code of conduct.		
06.02 List the basic parts of the industry code of conduct.		
06.03 Explain how the code of conduct protects both customers and workers.		
06.04 Explain the relationship between the code of conduct and the laws governing privacy of telephone conversations.		
07.0 Demonstrate traffic control – the student will be able to:		
07.01 Use roadside signals. (Optional)		
07.02 Use signage, barricades and cones. (Optional)		
07.03 Perform flagging and hand signals. (Optional)		
07.04 Explain general outdoor safety procedures.		
08.0 Demonstrate pole climbing – the student will be able to:		
08.01 Conduct a pole-climbing safety inspection. (Optional)		
08.02 Use pole-climbing equipment in a safe and correct manner. (Optional)		
08.03 Explain the hazards of pole climbing.		
08.04 Demonstrate safe and correct ladder usage.		
08.05 Select correct ladder for telecommunications work.		
08.06 Demonstrate ladder rigging for aerial installation.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
08.07 Demonstrate pole climbing to install drops and perform splicing. (Optional)		
09.0 Explain roadside safety – the student will be able to:		
09.01 Explain the hazards encountered around roadways.		
09.02 Work in a safe manner around roadways. (Optional)		
10.0 Explain electrical hazards – the student will be able to:		
10.01 Identify the hazards associated with work on telecommunications lines and equipment.		
10.02 Test and analyze telecommunications equipment and lines for safety hazards.		
11.0 Perform data line safety checks – the student will be able to:		
11.01 Check and identify hazardous line currents and voltages.		
12.0 Demonstrate proficiency in making electrical connections, splices and basic field repairs – the student will be able to:		
12.01 Apply proper Occupational Safety Health Administration (OSHA) Safety Standards.		
12.02 Make electrical connections.		
12.03 Identify and use hand tools properly.		
12.04 Identify and use power tools properly.		
12.05 Demonstrate acceptable soldering techniques.		
12.06 Demonstrate acceptable de-soldering techniques.		
12.07 Demonstrate Electrostatic Discharge (ESD) safety procedures.		
12.08 Describe the construction of Printed Circuit Boards (PCBs). (Optional)		
12.09 Demonstrate rework and repair techniques. (Optional)		
13.0 Troubleshoot and repair telecommunications system wiring – the student will be able to:		
13.01 Test telecommunications systems and evaluate based on established criteria.		
13.02 Identify range of fault conditions for telecommunications systems.		
13.03 Demonstrate telecommunications fault identification skills.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
13.04 Use field documentation techniques for repair of systems.		
13.05 Use test equipment and logic to locate faults.		
13.06 Demonstrate proficiency in repair techniques using splices, closure assembly and punch-down terminations.		
13.07 Validate repaired system to industry criteria.		
14.0 Demonstrate proficiency in customer relations – the student will be able to:		
14.01 Describe and demonstrate appropriate personal hygiene and professional attire.		
14.02 Describe and demonstrate effective listening techniques.		
14.03 Describe and apply techniques for installing customer confidence and satisfaction.		
14.04 Describe and apply techniques for keeping the customer informed		
14.05 Describe and apply effective follow-up techniques.		
14.06 Demonstrate discretion in interacting with customers in field and retail environments.		
14.07 Demonstrate an understanding of basic conflict resolution.		
15.0 Demonstrate proficiency in basic DC circuitry – the student will be able to:		
15.01 Solve problems in electronic units utilizing metric prefixes.		
15.02 Identify sources of electricity.		
15.03 Define voltage, current, resistance, power and energy.		
15.04 Apply Ohm's law and power formulas.		
15.05 Identify and interpret industry appropriate color codes and symbols to identify electrical components and values.		
15.06 Measure properties of a circuit using Volt-Ohm Meters (VOM), Digital Volt Meters (DVM) and oscilloscopes.		
15.07 Compute conductance and calculate and measure resistance of conductors and insulators.		
15.08 Apply Ohm's law to series circuits.		
15.09 Construct and verify operation of series circuits.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
15.10 Analyze and troubleshoot series circuits.		
15.11 Apply Ohm's law to parallel circuits.		
15.12 Construct and verify the operation of parallel circuits.		
15.13 Analyze and troubleshoot parallel circuits.		
16.0 Demonstrate appropriate understanding of basic math – the student will be able to:		
16.01 Solve problems for volume, weight, area and circumference; and, determine perimeter measurements for rectangles, squares and cylinders.		
16.02 Measure tolerances on horizontal and vertical surfaces using millimeters, centimeters, feet and inches.		
16.03 Add, subtract, multiply and divide using fractions, decimals and whole numbers.		
16.04 Determine the correct purchase price, to include sales tax for a materials list containing a minimum of six items.		
16.05 Demonstrate an understanding of federal, state and local taxes and their computation.		
16.06 Use basic algebra to solve job-related problems.		
17.0 Demonstrate proficiency in the use of tools and test equipment used in the telecommunications industry – the student will be able to:		
17.01 Install twisted pair cabling systems.		
17.02 Terminate twisted pair cords, plugs and outlets.		
17.03 Test installed cables.		
17.04 Troubleshoot cables.		
17.05 Demonstrate proficiency in the current techniques and equipment used in the telecommunications industry.		
17.06 Demonstrate proficiency in usage of NEC codes.		
17.07 Demonstrate proficiency in usage of the color codes and configuration.		
17.08 Interpret cable substitution hierarchy.		

**Florida Department of Education
Student Performance Standards**

Course Title: Telecommunication Technology 2
Course Number: 8730220
Course Credit: 1

Course Description:

This course covers competencies in science, AC circuits, network cabling, and the use of test equipment.

Abbreviations:

FS-M/LA = Florida Standards for Math/Language Arts
 NGSSS-Sci = Next Generation Sunshine State Standards for Science

Note: This course is pending alignment in the following categories: FS-M/LA and NGSSS-Sci.

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
18.0 Demonstrate science knowledge and skills – the student will be able to:		
18.01 Demonstrate an understanding of the effects of temperature extremes and moisture content in regards to electronic equipment.		
18.02 Demonstrate an understanding of the impact and effects of Electrostatic Discharge (ESD), power surges, grounding and lightning strikes.		
18.03 Apply the scientific method to draw conclusions or make inferences from data.		
18.04 Demonstrate deductive reasoning techniques when troubleshooting		
18.05 Demonstrate an understanding of the effects of heat load and ventilation in regards to electronic equipment.		
18.06 Identify safety and health related issues including exposure to work-related chemicals and hazardous materials, and demonstrate appropriate precautionary measures.		
18.07 Demonstrate an understanding of environmental impact and regulations in regards to the appropriate disposal of electronic equipment.		
19.0 Demonstrate proficiency in basic AC circuitry – the student will be able to:		
19.01 Identify properties of an AC signal.		
19.02 Identify AC sources.		

CTE Standards and Benchmarks	FS-M/LA	NGSS-Sci
19.03 Analyze and measure AC signals utilizing VOM and DVM.		
19.04 Perform AC safety checks.		
19.05 Perform AC safety checks.		
19.06 Explain high voltage power systems and hazards.		
20.0 Analyze technical data associated with cable validation and fault location – the student will be able to:		
20.01 Read and understand telecommunications technical data.		
20.02 Interpret diagrams and schematics.		
20.03 Document work.		
21.0 Install, repair, terminate and test network cabling – the student will be able to:		
21.01 Terminate cable using industry standard configuration termination (e.g., RJ11, RJ12, RJ45, BNC, AUI).		
21.02 Install cabling using industry standard tools, telepole, and fish tape.		
21.03 Punch down cables on standard wiring blocks (66 Block, 110 Block).		
21.04 Route cable over aerial and buried drops.		
22.0 Demonstrate advanced skills in test equipment usage to locate faults – the student will be able to:		
22.01 Operate butt-in test sets.		
22.02 Operate toners.		
22.03 Operate subscriber line test set.		
22.04 Operate cable locator test sets.		

Florida Department of Education
Student Performance Standards

Course Title: Telecommunication Technology 3
Course Number: 8730230
Course Credit: 1

Course Description:

This course provides competencies in advanced cable repair techniques, test equipment, basic computer architecture, peripheral equipment, and electronic information exchange.

Abbreviations:

FS-M/LA = Florida Standards for Math/Language Arts
 NGSSS-Sci = Next Generation Sunshine State Standards for Science

Note: This course is pending alignment in the following categories: FS-M/LA and NGSSS-Sci.

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
23.0 Demonstrate advanced cable repair techniques – the student will be able to: (Optional)		
23.01 Prepare buried cable for splicing.		
23.02 Splice buried cable.		
23.03 Make various closure devices for spliced buried cable.		
23.04 Prepare aerial cable for splicing.		
23.05 Splice aerial cable.		
23.06 Make various closure devices for spliced aerial cable.		
24.0 Demonstrate usage of test equipment to validate network and telecommunications cabling systems – the student will be able to:		
24.01 Validate telephone lines using industry standard procedures.		
24.02 Validate high-speed digital lines using industry standard procedures.		
24.03 Validate advanced signal lines (fiber optics).		

CTE Standards and Benchmarks		FS-M/LA	NGSSS-Sci
25.0	Demonstrate a basic understanding of computer system architecture – the student will be able to:		
25.01	Identify network configurations.		
25.02	Distinguish between faults caused by wiring verses architecture configuration.		
25.03	Install cable connectors to match architecture.		
25.04	Explain cable limitations due to architecture.		
26.0	Demonstrate proficiency in peripheral equipment – the student will be to:		
26.01	Demonstrate an understanding of input/output devices.		
26.02	Identify and define serial and parallel interface standards.		
26.03	Troubleshoot, install and upgrade telecommunications devices and adapter cards (e.g., NIC, modem).		
26.04	Demonstrate professional connector assembly procedures.		
27.0	Demonstrate proficiency in electronic information exchange – the student will be able to:		
27.01	Install, connect and maintain network clients to various network operating systems.		
27.02	Connect and configure computers for network connectivity.		
27.03	Describe use and system maintenance of a WAN and telecommunications system.		
27.04	Demonstrate knowledge of network protocols.		
27.05	Demonstrate knowledge of the fundamentals of an Internet system.		
27.06	Demonstrate knowledge of telecommunications services and standards.		

**Florida Department of Education
Student Performance Standards**

Course Title: Telecommunication Technology 4
Course Number: 8730240
Course Credit: 1

Course Description:

This course covers competencies in site requirements, the use of tables and charts, worksite plans, and twisted pair design.

Abbreviations:

FS-M/LA = Florida Standards for Math/Language Arts
 NGSSS-Sci = Next Generation Sunshine State Standards for Science

Note: This course is pending alignment in the following categories: FS-M/LA and NGSSS-Sci.

CTE Standards and Benchmarks		FS-M/LA	NGSSS-Sci
28.0	Demonstrate proficiency in site requirements and considerations – the student will be able to:		
28.01	Demonstrate knowledge of data communication test equipment.		
28.02	Demonstrate knowledge of telecommunications wiring systems.		
28.03	Demonstrate knowledge of cable and LAN topology.		
28.04	Demonstrate knowledge of hubs, switches and routers.		
28.05	Calculate and determine power requirements.		
28.06	Calculate and determine requirements of the working environment.		
28.07	Install, configure and troubleshoot LAN cable systems (twisted pair, coax, or fiber).		
28.08	Configure and troubleshoot patch bay, hubs and transceivers.		
29.0	Use tables and charts – the student will be able to:		
29.01	Determine expected levels of resistance for wiring configurations.		
29.02	Determine changes in resistance due to temperature changes.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
29.03 Determine capacitance of a given cable configuration.		
29.04 Demonstrate quick test methods using Quick Test Charts.		
30.0 Prepare worksite plans – the student will be able to:		
30.01 Draw site plans.		
30.02 Review, evaluate and plan for site electrical considerations.		
30.03 Draw cable runs (cut-sheet).		
30.04 Evaluate and select wiring room.		
31.0 Demonstrate proficiency in twisted pair design – the student will be able to:		
31.01 Select correct cable for CAT5 installations.		
31.02 Ensure cable rating at patch panels conforms to industry standards.		
31.03 Test installed design to meet standards using test equipment.		

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 occupational standards and benchmarks outlined in this secondary program correlate to the standards and benchmarks of the postsecondary program with the same Classification of Instructional Programs (CIP) number.

MyCareerShines is an interactive resource to assist students in identifying their ideal career and to enhance preparation for employment. Teachers are encouraged to integrate this resource into the program curriculum to meet the employability goals for each student.

Career and Technical Student Organization (CTSO)

SkillsUSA is the intercurricular career and technical student organization(s) 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.

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 Occupational Completion Point (OCP) or a Modified Occupational Completion Point (MOCP). 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 an OCP/MOCP. The student should work on different competencies and new applications of competencies each year toward completion of the OCP/MOCP. 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: Journalism
Program Type: Career Preparatory
Career Cluster: Arts, A/V Technology and Communication

Secondary – Career Preparatory

Program Number	8771100
CIP Number	0609999900
Grade Level	9-12
Standard Length	4 credits
Teacher Certification	Refer to the Program Structure section.
CTSO	SkillsUSA
SOC Codes (all applicable)	27-3041 – Editors

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 Arts, A/V Technology and Communication 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 Arts, A/V Technology and Communication career cluster.

The purpose of this program is to prepare students for employment as writers and editors (SOC 27-3041). This program provides a medium whereby the student will be given the opportunity for practical hands-on experiences that incorporate academic skills into a real life situation.

The program familiarizes individuals with creative writing, script writing, graphic communications, desktop publishing, television production, photojournalism, and investigative reporting.

The presentation of subject matter should incorporate team teaching. Activities should utilize a rotational type format so that the student is exposed and reinforced academically and vocationally for each outcome.

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 one occupational completion point consisting of five courses.

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:

OCP	Course Number	Course Title	Teacher Certification	Length	SOC Code	Level	Graduation Requirement
A	1006300	Journalism I	ENGLISH 1 @2 @4 JOURNALISM1 @2 @4 MG ENGLISH C	1 credit	27-3041	2	PA
	8771110	Industrial Communications	TV PRO TEC @ 7 G PHOTOG @ 7 G COMM ART @ 7 G MG ENG \$C BUS ED \$1 \$2 \$4 ENGLISH 1 @2 @4 JOURNALISM1 @2 @4	1 credit		2	PA
	8209510	Digital Design 1	BUS ED 1 @2 CLERICAL @7 7G COMM ART @7 7G COMP SCI 6@2 MANAG SUPV 7G SECRETAR 7 G TC COOP ED @7 ELECT DP @7 G ENG & TEC ED 1 @ 2	1 credit		2	PA
	8207110	Web Design 1 or	BUS ED 1 @ 2 VOE @ 7 TEACH Coop Ed @ 7 BUS DP @7 G ELECT DP @7 G CLERICAL @7 G SECRETAR @7 G TEC ELEC \$7 G COMP SCI 6 @2	1 credit		2	PA

9001110	Foundations of Web Design	BUS ED 1 @ 2 VOE @ 7 TEACH Coop Ed @ 7 BUS DP @7 G ELECT DP @7 G CLERICAL @7 G SECRETAR @7 G TEC ELEC \$7 G COMP SCI 6 @2 COMM ART @7 7G WEB DEV 7G	1 credit		3	PA
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(Graduation Requirement Abbreviations- EQ= Equally Rigorous Science, PA= Practical Arts, EC= Economics)

Academic Alignment Tables

Academic alignment is an ongoing, collaborative effort of professional educators specializing in the fields of science, mathematics, English/language arts, and Career and Technical Education (CTE). This initiative supports CTE programs by improving student performance through the integration of academic content within CTE courses. Career and Technical Education courses that have been aligned to the Next Generation Sunshine State Standards for Science and the Florida Standards for Mathematics and English/Language Arts will show the following data: the quantity of academic standards in the CTE course; the total number of standards contained in the academic course; and the percentage of alignment to the CTE course.

Courses	Anatomy/ Physiology Honors	Astronomy Solar/Galactic Honors	Biology 1	Chemistry 1	Earth- Space Science	Environmental Science	Genetics	Integrated Science	Marine Science 1 Honors	Physical Science	Physics 1
1006300	**	**	**	**	**	**	**	**	**	**	**
8771110	1/87 1%	1/80 1%	20/83 24%	1/69 1%	20/67 30%	1/70 1%	1/69 1%	20/82 24%	1/66 2%	20/74 27%	1/72 1%
8209510	23/87 26%	24/80 30%	3/83 4%	24/69 35%	4/67 6%	21/70 30%	23/69 33%	3/82 4%	18/66 27%	4/74 5%	24/72 33%
8207110	**	**	**	**	**	**	**	**	**	**	**
9001110	3/87 3%	2/80 3%	2/83 2%	2/69 3%	1/67 1%	3/69 4%	1/82 1%	3/66 5%	1/74 1%	2/72 3%	3/70 4%

** Alignment pending review

Alignment attempted, but no correlation to academic course

Courses	Algebra 1	Algebra 2	Geometry	English 1	English 2	English 3	English 4
1006300	**	**	**	**	**	**	**
8771110	14/67 21%	8/75 11%	14/54 26%	7/46 15%	7/45 16%	#	#

8209510	15/67 22%	20/75 27%	27/54 50%	#	#	5/45 11%	5/45 11%
8207110	**	**	**	**	**	**	**
9001110	16/67 24%	11/75 15%	15/54 28%	**	**	**	**

** Alignment pending review

Alignment attempted, but no correlation to academic course

Florida Standards for Technical Subjects

Florida Standards (FS) for English Language Arts and Literacy in History/Social Studies, Science, and Technical Subjects are the critical reading and writing literacy standards designed for grade 6 and above. These standards are predicated on teachers of history/social studies, science, and technical subjects using their content area expertise to help students meet the particular challenges of reading, writing, speaking, listening, and language in their respective fields. The FS for Mathematical Practices are designed for grades K-12 and describe varieties of expertise that educators at all levels should seek to develop in their students. These practices rest on important “processes and proficiencies” with longstanding importance in mathematics education.

Instructors must incorporate the Florida Standards for Technical Subjects and Mathematical Practices throughout instruction of this CTE program.

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.

Common Career Technical Core – Career Ready Practices

Career Ready Practices describe the career-ready skills that educators should seek to develop in their students. These practices are not exclusive to a Career Pathway, program of study, discipline or level of education. Career Ready Practices should be taught and reinforced in all career exploration and preparation programs with increasingly higher levels of complexity and expectation as a student advances through a program of study.

1. Act as a responsible and contributing citizen and employee.
2. Apply appropriate academic and technical skills.
3. Attend to personal health and financial well-being.
4. Communicate clearly, effectively and with reason.
5. Consider the environmental, social and economic impacts of decisions.
6. Demonstrate creativity and innovation.
7. Employ valid and reliable research strategies.
8. Utilize critical thinking to make sense of problems and persevere in solving them.
9. Model integrity, ethical leadership and effective management.
10. Plan education and career path aligned to personal goals.
11. Use technology to enhance productivity.
12. Work productively in teams while using cultural/global competence.

Standards

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

- 01.0 Demonstrate fundamental skills in the use of the writing process for varied journalistic media.
- 02.0 Demonstrate fundamental use of production skills (e.g., layout design, ad design, storyboarding) for varied mass communication documents or electronic media.
- 03.0 Demonstrate awareness of the history and evolution of journalism and the responsible and ethical use of information (e.g., First Amendment, copyright, intellectual freedom).
- 04.0 Demonstrate awareness of ethical issues (e.g., manipulation, misrepresentation, fraud) when addressing social, cultural, and political issues through print and non-print photojournalism.
- 05.0 Demonstrate fundamental use of organization and management techniques related to production of journalistic media (e.g., team building, leadership, business skills, time management, task organization).
- 06.0 Demonstrate fundamental use of technology for research, production, and dissemination of journalistic media.
- 07.0 Analyze varied journalistic documents or electronic media.
- 08.0 Demonstrate awareness of varied careers in journalism.
- 09.0 Produce writing appropriate to journalistic media.
- 10.0 Organize and utilize production modes appropriate to journalistic media, including desktop publishing, keyboarding, photography, commercial art, and television production.
- 11.0 Plan a set for television production.
- 12.0 Perform lighting activities for a planned production.
- 13.0 Demonstrate correct use of basic equipment used in television production.
- 14.0 Demonstrate ability to identify different types of script copy.
- 15.0 Demonstrate ability to write script in broadcast style.
- 16.0 Perform electronic/desktop publishing operations.
- 17.0 Demonstrate knowledge of electronic/desktop publishing concepts.
- 18.0 Perform mechanical creative support operations.
- 19.0 Demonstrate proficiency in computer skills.
- 20.0 Demonstrate knowledge of digital publishing concepts.
- 21.0 Perform decision-making activities.
- 22.0 Demonstrate proficiency in digital imaging.
- 23.0 Demonstrate proficiency in the safe and ethical use of the Internet to locate information.
- 24.0 Demonstrate the ability to set project requirements, engage in project planning, and utilize the design process.
- 25.0 Perform layout, project design, and measurement activities associated with digital planning.
- 26.0 Demonstrate an understanding of color theory and its role in digital design.
- 27.0 Demonstrate an understanding of typography.
- 28.0 Demonstrate basic skill in digital photography.
- 29.0 Demonstrate skill in the use of digital imaging software applications.
- 30.0 Develop an awareness of the emergent technologies associated with digital design.
- 31.0 Participate in work-based learning experiences.

- 32.0 Perform decision making activities.
- 33.0 Perform e-mail activities.
- 34.0 Demonstrate proficiency using operating systems.
- 35.0 Demonstrate proficiency navigating the internet and intranet.
- 36.0 Demonstrate proficiency using HTML commands.
- 37.0 Demonstrate proficiency in page design applicable to the WWW.
- 38.0 Develop an awareness of internet/intranet tools.
- 39.0 Demonstrate proficiency setting website project requirements during the design phase and project planning phase of Web development.
- 40.0 Demonstrate proficiency creating a logical website file structure.
- 41.0 Create basic webpages that meet the industry standards as set forth by the W3C (World Wide Web Consortium).
- 42.0 Incorporate images and graphical formatting on a webpage.
- 43.0 Create a basic table structure.
- 44.0 Incorporate form structures in a webpage.
- 45.0 Discuss appropriate use of frame structures and their outdated usage.
- 46.0 Understand the basic principles of Cascading Style Sheets-CSS.
- 47.0 Use CSS to create basic webpages based on industry standards.
- 48.0 Develop website page layout using AP (Absolute Positioning) elements.
- 49.0 Examine web design technologies and techniques.
- 50.0 Describe the process for publishing a website.
- 51.0 Describe how website performance is monitored and analyzed.
- 52.0 Create an informational website that conforms to industry standards as set forth by the W3C.
- 53.0 Demonstrate efficient, consistent website development practice (use of templates, snippets).
- 54.0 Demonstrate language arts knowledge and skills.
- 55.0 Demonstrate mathematics knowledge and skills.

**Florida Department of Education
Student Performance Standards**

Course Title: Journalism I
Course Number: 1006300
Course Credit: 1

Course Description:

This course is designed to develop basic entry-level skills required for careers in the writing and editing industry.

Basic Assumptions for Language Arts Education:

- Reading, writing, speaking, listening, and viewing competencies are integrated throughout students' learning experiences.
- Benchmarks for the Sunshine State Standards are repeated as needed in course sequences. As students progress from one course to the next, increases should occur in the complexity of materials and tasks and in the students' independence in the application of skills and strategies.
- Learning tasks and materials accommodate the individual needs of students.
- Technology is available for students to develop competencies in the language arts.

- A. Major Concepts/Content. The purpose of this course is to enable students to develop fundamental skills in the production of print or electronic journalistic media.

The content should include, but not be limited to, the following:

- writing processes
- production skills for varied media
- history and ethics of journalism
- applications and issues in photojournalism
- organization and management techniques
- technology for research, production, and dissemination
- analysis of journalistic media
- careers in journalism

This course shall integrate the Goal 3 Student Performance Standards of the Florida System of School Improvement and Accountability as appropriate to the content and processes of the subject matter.

Course student performance standards must be adopted by the district, and they must reflect appropriate Sunshine State Standards

benchmarks.

- B. Special Note. Hands-on activities are integral to this course. This course may require students to participate in activities beyond the school day.
- C. Course Requirements. These requirements include, but are not limited to, the benchmarks from the Sunshine State Standards that are most relevant to this course. Benchmarks correlated with a specific course requirement may also be addressed by other course requirements as appropriate. The benchmarks printed in regular type are required for this course. The portions printed in *italic type* are not required for this course. Some requirements in this course are not addressed in the Sunshine State Standards.

Abbreviations:

FS-M/LA = Florida Standards for Math/Language Arts

NGSSS-Sci = Next Generation Sunshine State Standards for Science

Note: This course is pending alignment in the following categories: FS-M/LA and NGSSS-Sci.

CTE Standards and Benchmarks		FS-M/LA	NGSSS-Sci
01.0	Demonstrate fundamental skills in the use of the writing process for varied journalistic media.		
01.01	Locate, gather, analyze, and evaluate written information for a variety of purposes, including research projects, real-world tasks, and self-improvement. LA.A.2.4.4		
01.02	Select and use appropriate study and research skills and tools according to the type of information being gathered or organized, including almanacs, government publications, microfiche, news sources, and information services. LA.A.2.4.6		
01.03	Analyze the validity and reliability of primary source information and use the information appropriately. LA.A.2.4.7		
01.04	Synthesize information from multiple sources to draw conclusions. LA.A.2.4.8		
01.05	Select and use appropriate prewriting strategies, such as brainstorming, graphic organizers, and outlining. LA.B.1.4.1		
01.06	Draft and revise writing that LA.B.1.4.2		
	<ul style="list-style-type: none"> is focused, purposeful, and reflects insight into the writing situation; 		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
<ul style="list-style-type: none"> • has an organizational pattern that provides for a logical progression of ideas; 		
<ul style="list-style-type: none"> • has effective use of transitional devices that contribute to a sense of completeness; 		
<ul style="list-style-type: none"> • has support that is substantial, specific, relevant, and concrete; 		
<ul style="list-style-type: none"> • demonstrates a commitment to and involvement with the subject; 		
<ul style="list-style-type: none"> • uses creative writing strategies as appropriate to the purpose of the paper; 		
<ul style="list-style-type: none"> • demonstrates a mature command of language with precision of expression; 		
<ul style="list-style-type: none"> • has varied sentence structure; and 		
<ul style="list-style-type: none"> • has few, if any, conventional errors in mechanics, usage, punctuation, and spelling. 		
01.07 Produce final documents that have been edited for		
<ul style="list-style-type: none"> • correct spelling; 		
<ul style="list-style-type: none"> • correct punctuation, including commas, colons, and common use of semicolons; 		
<ul style="list-style-type: none"> • correct capitalization; 		
<ul style="list-style-type: none"> • correct sentence formation; 		
<ul style="list-style-type: none"> • correct instances of possessives, subject/verb agreement, instances of noun/pronoun agreement, and the intentional use of fragments for effect; and 		
<ul style="list-style-type: none"> • correct formatting that appeals to readers, including appropriate use of a variety of graphics, tables, charts, and illustrations in both standard and innovative forms. LA.B.1.4.3 		
01.08 Write fluently for a variety of occasions, audiences, and purposes, making appropriate choices regarding style, tone, level of detail, and organization. LA.B.2.4.3		
01.09 Make appropriate adjustments in language use for social, academic, and life situations, demonstrating sensitivity to gender and cultural bias. LA.D.1.4.2		
02.0 Demonstrate fundamental use of production skills (e.g., layout design, ad design, storyboarding) for varied mass communication documents or electronic media.		
02.01 Organize information using appropriate systems. LA.B.2.4.2		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
02.02 Recognize production elements that contribute to the effectiveness of a specific medium. LA.D.2.4.3		
03.0 Demonstrate awareness of the history and evolution of journalism and the responsible and ethical use of information (e.g., First Amendment, copyright, intellectual freedom).		
03.01 Understand that laws control the delivery and use of media to protect the rights of authors and the rights of media owners. LA.D.2.4.6		
04.0 Demonstrate awareness of ethical issues (e.g., manipulation, misrepresentation, fraud) when addressing social, cultural, and political issues through print and non-print photojournalism.		
04.01 Determine main concept and supporting details in order to analyze and evaluate non-print media messages. LA.C.2.4.1		
04.02 Understand factors that influence the effectiveness of nonverbal cues used in non-print media, such as the viewer's past experiences and preferences, and the context in which the cues are presented. LA.C.2.4.2		
04.03 Understand the use of images and sounds to elicit the reader's emotions in both fiction and nonfiction. LA.E.2.4.4		
05.0 Demonstrate fundamental use of organization and management techniques related to production of journalistic media (e.g., team building, leadership, business skills, time management, task organization).		
05.01 Create a collaborative and comprehensive plan which addresses specific events, products, or projects either personally or for the work place. AT.1.1.4.2		
05.02 Analyze the managerial skills necessary for decision making in different work-related situations. AT.2.1.4.2		
05.03 Demonstrate the ability to cooperatively work in various settings across diverse populations. AT.9.1.4.2		
05.04 Select and use appropriate listening strategies according to the intended purpose, such as solving problems, interpreting and evaluating the techniques and intent of		

CTE Standards and Benchmarks		FS-M/LA	NGSSS-Sci
	presentation, and taking action in career-related situations. LA.C.1.4.1		
05.05	Use effective strategies for informal and formal discussions, including listening actively and reflectively, connecting to and building on the ideas of a previous speaker, and respecting the viewpoints of others. LA.C.1.4.3		
05.06	Apply oral communication skills to interviews, group presentations, formal presentations, and impromptu situations. LA.C.3.4.4		
06.0	Demonstrate fundamental use of technology for research, production, and dissemination of journalistic media.		
06.01	Select and use a variety of electronic media, such as the Internet, information services, and desktop publishing software programs, to create, revise, retrieve, and verify information. LA.B.2.4.4		
07.0	Analyze varied journalistic documents or electronic media.		
07.01	Identify devices of persuasion and methods of appeal and their effectiveness. LA.A.2.4.5		
07.02	Identify bias, prejudice, or propaganda in <i>oral</i> messages. LA.C.1.4.4		
07.03	Understand specific ways in which language has shaped the reactions, perceptions, and beliefs of the local, national, and global communities. LA.D.2.4.1		
07.04	Understand the subtleties of literary devices and techniques in the comprehension and creation of communication. LA.D.2.4.2		
07.05	Critically analyze specific elements of mass media with regard to the extent to which they enhance or manipulate information. LA.D.2.4.5		
08.0	Demonstrate awareness of varied careers in journalism.		

**Florida Department of Education
Student Performance Standards**

Course Title: Industrial Communications
Course Number: 8771110
Course Credit: 1

Course Description:

This course is designed to develop basic entry-level skills required for careers in the communications industry.

Abbreviations:

FS-M/LA = Florida Standards for Math/Language Arts
 NGSSS-Sci = Next Generation Sunshine State Standards for Science

CTE Standards and Benchmarks		FS-M/LA	NGSSS-Sci
09.0	Produce writing appropriate to journalistic media--The student will be able to:		
09.01	Write headlines and captions for a variety of journalistic activities.	LAFS.910.W.1.2 LAFS.910.W.2.4	
09.02	Identify the "who, what, when, where, and how" components of a news story.	LAFS.910.W.1.2 LAFS.910.W.2.4	
09.03	Write a news story in acceptable journalistic style.	LAFS.910.W.1.2 LAFS.910.W.2.4	
09.04	Write a sports article using news style and appropriate jargon.	LAFS.910.W.1.2 LAFS.910.W.2.4	
09.05	Write an editorial of commendation, condemnation, or both, offering observations and/or criticisms.	LAFS.910.W.1.2 LAFS.910.W.2.4	
09.06	Write a feature story that adheres to acceptable column style.	LAFS.910.W.1.2 LAFS.910.W.2.4	
09.07	Describe how copyright law pertains to professional and educational use of other writers' materials.	LAFS.910.W.3.7 LAFS.910.W.3.8	
09.08	Write copy for a variety of journalistic media (television, radio, magazines, etc.)	LAFS.910.W.1.2 LAFS.910.W.2.4	
10.0	Organize and utilize production modes appropriate to journalistic media, including desktop publishing, keyboarding, photography, commercial art, and television production--The student will be able to:		
10.01	Identify the principles of layout design.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
10.02 Identify the basic elements necessary to produce a good photograph.		SC.912.N.1.1
10.03 Describe how the use of photograph or photograph idea extends the written word.		
10.04 Identify equipment appropriate for production of a variety of journalistic media.		SC.912.N.1.1
10.05 Identify principles of advertising.		
10.06 Identify proofreading symbols.		
11.0 Plan a set for television production--The student will be able to:		
11.01 Prepare television set for a planned production.		
11.02 Draw and design a set plan to scale.		
11.03 Select and arrange state props.		
11.04 Utilize hand tools to construct scene components.		
11.05 Inspect and repair scenery as needed.		
12.0 Perform lighting activities for a planned production--The student will be able to:		
12.01 Describe types of lighting fixtures.	LAFS.910.L.3.6	
12.02 Identify parts of lighting fixtures.	LAFS.910.L.3.6	
12.03 Perform special effects lighting.		
12.04 Set-up appropriate lighting for a production.		SC.912.N.1.1
12.05 Describe functions of master lighting panel and dimmer board.	LAFS.910.L.3.6	
12.06 Operate master lighting panel to dimmer board.		
12.07 Analyze lighting needs for production.		
13.0 Demonstrate correct use of basic equipment used in television production--The student will be able to:		
13.01 Load, record and play a videotape.		
13.02 Demonstrate the steps necessary to set up, turn on, and operate a video camera.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
13.03 Demonstrate picture composition.		
13.04 Identify, select and demonstrate use of an appropriate microphone.		SC.912.N.1.1
13.05 Identify the qualities of a good audio track.		
13.06 Demonstrate basic television lighting.		
13.07 Explain the care, storage and use of television hardware and software.		SC.912.N.1.1
14.0 Demonstrate ability to identify different types of script copy--The student will be able to:		
14.01 Identify scripts by format.	LAFS.910.L.3.6 LAFS.910.W.1.1,2,3	
14.02 Define terminology used in broadcast script writing.	LAFS.910.L.3.6	
15.0 Demonstrate ability to write script in broadcast style--The student will be able to:		
15.01 Plan and produce a storyboard.		
15.02 Specify steps leading to broadcast scripts.		
15.03 Write broadcast scripts.		
16.0 Perform electronic/desktop publishing operations--The student will be able to:		
16.01 Identify machine specifications and functions.		
16.02 Prepare computer printer and scanner for operations.		
17.0 Demonstrate knowledge of electronic/desktop publishing concepts--The student will be able to:		
17.01 Identify the skills needed by an electronic desktop publisher.		
17.02 Identify significant developments in the electronic/desktop publishing industry.		
17.03 Define commonly used terms in graphic communications.	LAFS.910.L.3.6	
17.04 Identify characteristics of paper.		
17.05 Identify software used in electronic/desktop publishing.		
18.0 Perform mechanical creative support operations--The student will be able to:		

CTE Standards and Benchmarks	FS-M/LA	NGSS-Sci
18.01 Identify characteristics of type, type families, type series, and type styles.		
18.02 Identify elements of design.		
18.03 Copy, fit, and markup (specify type sizes and styles).		
18.04 Paste up mechanical elements electronically.		
18.05 Check and compare completed mechanical to comprehensive layout for final proofing.		
18.06 Prepare rough layout design.		

**Florida Department of Education
Student Performance Standards**

Course Title: Digital Design 1
Course Number: 8209510
Course Credit: 1

Course Description:

This course is designed to develop basic entry-level skills required for careers in the digital publishing industry. The content includes computer skills; digital publishing concepts and operations; layout, design, and measurement activities; decision-making activities; and digital imaging.

Abbreviations:

FS-M/LA = Florida Standards for Math/Language Arts
 NGSSS-Sci = Next Generation Sunshine State Standards for Science

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
19.0 Demonstrate proficiency in computer skills – the student will be able to:		
19.01 Utilize appropriate font management techniques (e.g., TrueType, OpenType, font installation/removal).		
19.02 Perform storage management (e.g., cloud-based services, USB drives).		
19.03 Perform basic maintenance of computers and peripherals.		
20.0 Demonstrate knowledge of digital publishing concepts – the student will be able to:		
20.01 Identify the skills required of a digital designer.		
20.02 Define the terms commonly used in graphic communications.	LAFS.910.L.3.6 LAFS.1112.L.3.6	
20.03 Identify the characteristics of paper (e.g., weight, point).	MAFS.912.N-Q.1.1,2,3 MAFS.912.G-SRT.1.1, 2,3 MAFS.912.G-SRT.2.4,5 MAFS.912.G-SRT.3.6,8 MAFS.912.A-SSE.1.1	
20.04 Identify different types of color (e.g., RGB, WebSafe, Pantone Color Matching System, HEX).	MAFS.912.G-CO.1.1,2,3,4,5 MAFS.912.G-CO.2.6,7,8 MAFS.912.G-CO.3.9 MAFS.912.G-CO.4.12 MAFS.912.G-GPE.2.4,7	SC.912.P.10.18

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
20.05 Identify the software used in digital publishing.		
21.0 Perform decision-making activities – the student will be able to:		
21.01 Determine work priorities.	MAFS.912.N-Q.1.1,2,3	
21.02 Use critical thinking skills to evaluate information and select relevant material.	LAFS.1112.W.2.5 LAFS.910.W.2.5 LAFS.910.W.3.8 LAFS.1112.W.3.8 MAFS.912.N-Q.1.1,2,3	SC.912.N.1.1
21.03 Determine the audience.	LAFS.910.W.2.4,5 LAFS.1112.W.2.4,5	
22.0 Demonstrate proficiency in digital imaging – the student will be able to:		
22.01 Demonstrate proper use of scanners, digital cameras, and various input devices.		
22.02 Proofread manually and digitally.		
23.0 Demonstrate proficiency in the safe and ethical use of the Internet to locate information – the student will be able to:		
23.01 Identify and use web-related terminology.		
23.02 Define <i>Universal Resource Locator</i> (URL) and associated protocols (e.g., http, ftp, telnet, mailto).		
23.03 Compare and contrast the various types of Internet domains (e.g., .com, .org, .edu, .gov, .net, .mil).		
23.04 Demonstrate proficiency using search engines, including Boolean search techniques.		
23.05 Apply the rules for properly citing works or other information obtained from the Internet.		
23.06 Identify and apply Copyright Fair Use guidelines.		
23.07 Evaluate web-based information for credibility and quality using basic guidelines and indicators (e.g., authority, affiliation, purpose).		
23.08 Demonstrate an understanding of safe and ethical Internet usage.		
23.09 Describe cyber-bullying and its impact on the victims and perpetrators.		
24.0 Demonstrate the ability to set project requirements, engage in project planning, and utilize the design process – the student will be able to:		
24.01 Identify the purpose, audience, and the needs of the audience for the preparation of design projects.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
24.02 Research and describe the implications of audience, purpose/message, and time constraints relative to a design project.		
24.03 Make decisions based on specifications.		
24.04 Research current applications and perspectives related to a project.		
24.05 Explain the relationship between design criteria and design constraints.		
24.06 Produce thumbnail sketches and rough designs.		
25.0 Perform layout, project design, and measurement activities associated with digital publishing – the student will be able to:		
25.01 Demonstrate an understanding of the elements and principles of design (e.g., line, shape, balance).		
25.02 Determine the appropriate type of basic layout for a specified problem (e.g., audience, purpose).		
25.03 Determine the activities and implications of content preparation and editing/proofreading.		
25.04 Develop and apply specifications for projects.		
25.05 Demonstrate basic technical skills using a desktop or digital publishing application (e.g., InDesign, Publisher).		
25.06 Identify distinct components in a layout (e.g., headlines, subheads, body copy).		
25.07 Demonstrate appropriate use of typography (visual hierarchy, proximity, alignment, contrast, repetition).		
25.08 Compare and contrast methods of measurement used in desktop publishing (e.g., inches, centimeters, millimeters, points, picas).		
25.09 Produce a variety of designs using digital publishing applications (e.g., flyers, postcards, brochures, business cards, letterhead).		
25.10 Incorporate clip art, images, borders, and other special effects into a layout.		
25.11 Select the appropriate color format and resolution for a variety of purposes (e.g., web, print).		
25.12 Understand and comply with the legalities of using preexisting images (e.g., copyright laws, trademarking).		
25.13 Create a professional portfolio to showcase projects.		
26.0 Demonstrate an understanding of color theory and its role in digital design – the student will be able to:		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
26.01 Describe the spectral colors in the visible light spectrum.		
26.02 Describe the difference between additive and subtractive color mixing.		
26.03 Compare and contrast RGB and CYMK color models as used in digital design.		
26.04 Define and explain the terminology related to color (e.g., chroma, lightness, saturation, hue, intensity, luminance/value, shade, tint).		
26.05 Demonstrate the application of color theory to design practices.		
27.0 Demonstrate an understanding of typography – the student will be able to:		
27.01 Define and describe the terminology related to character and line spacing (e.g., leading, kerning, tracking, baseline shift, ligature).		
27.02 Identify the characteristics and psychology of type, type families, type series, and type styles.		
27.03 Demonstrate an understanding of the history of typography.		
27.04 Describe the principles of typographic design as they relate to digital design.		
27.05 Compare and contrast the techniques of typographic communication relative to appropriateness and effectiveness.		
27.06 Demonstrate proficiency in incorporating typographic techniques into a communication design.		
27.07 Understand the installation and application of fonts.		
28.0 Demonstrate basic skill in digital photography – the student will be able to:		
28.01 Demonstrate the operation of a digital camera (typical features/modes).		
28.02 Demonstrate knowledge of ethics related to digital images/imaging; examine legal and content-related issues.		
28.03 Apply effective design principles in digital photography compositions (e.g., rule of thirds).		
28.04 Illustrate the essence of an event, quotation, or slogan through digital photography and/or digital imaging.		
29.0 Demonstrate skill in the use of digital imaging software applications – the student will be able to:		
29.01 Differentiate between raster (bitmap) and vector graphic images.		
29.02 Demonstrate basic knowledge of the tools and techniques for using vector software applications (e.g., Illustrator, Inkscape, CorelDRAW).		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
29.03 Create and edit various illustrations using vector software (e.g., line art, drawing basics, transforming/applying effects to objects, painting, type and type effects, layers).		
29.04 Demonstrate basic knowledge of the tools and techniques for using a raster-based software application (e.g., Photoshop, GNU Image Manipulation Program).		
29.05 Create and edit images/photographs using digital imaging software (e.g., layers, image editing, adjustments, filters, selections).		
29.06 Demonstrate skill in image manipulation, color correction, and special effects to creatively convey a message using vector-based or raster-based software applications.		
29.07 Demonstrate skill in scanning, cropping, and importing photographs.		
29.08 Compare and contrast image formats (e.g., BMP, EPS, GIF, JPEG, PDF, PNG, RAW, TIF).		
29.09 Demonstrate an understanding of image resolution and compression factors such as transmission speed, color reduction, and delivery media parameters.		
29.10 Incorporate scanned and digital photographs into documents comprising a specified design (e.g., poster, brochure, card, advertisement, web page).		
30.0 Develop an awareness of the emergent technologies associated with digital design – the student will be able to:		
30.01 Compare and contrast emerging technologies relative to their role in digital design (e.g., wireless, cloud-based, mobile, portable devices, kiosks).		
30.02 Describe social media as a form of digital design.		
30.03 Describe the emergent and evolving nature of software applications used in interactive design.		
30.04 Explain how the use of advanced image sensing devices have altered the manner in which communication takes place, especially those utilizing Quick Response (QR) Codes and other forms of two-dimensional bar coding techniques.		

**Florida Department of Education
Student Performance Standards**

Course Title: Web Design 1
Course Number: 8207110
Course Credit: 1

Course Description:

This course is designed to provide a basic overview of the internet, intranet, and the World Wide Web (www). The content includes operating systems; basic html commands; navigation of the internet, intranet, and web; and web page design.

Abbreviations:

FS-M/LA = Florida Standards for Math/Language Arts
 NGSSS-Sci = Next Generation Sunshine State Standards for Science

Note: This course is pending alignment in the following categories: FS-M/LA and NGSSS-Sci.

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
26.0 Participate in work-based learning experiences--The student will be able to:		
26.01 Participate in work-based learning experiences in a web design services environment.		
26.02 Discuss the use of technology in a web design services environment.		
26.03 Compare and contrast the software applications used in a web design services environment.		
27.0 Perform decision making activities--The student will be able to:		
27.01 Determine work priorities.		
27.02 Evaluate and select appropriate software packages to complete assigned tasks.		
27.03 Evaluate information to be used and choose relevant material.		
27.04 Determine the audience.		
27.05 Compare and select appropriate multimedia tools.		
28.0 Perform e-mail activities--The student will be able to:		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
28.01 Describe e-mail capabilities and functions.		
28.02 Create and send e-mail messages with attachments.		
28.03 Reply to and forward e-mail messages.		
28.04 Organize and manage e-mail messages.		
28.05 Utilize all applicable e-mail options and functions.		
28.06 Use the internet to perform e-mail activities.		
28.07 Define the standards used by internet/intranet e-mail (e.g., POP3, MIME).		
28.08 Describe the issues involved in sending and receiving documents as e-mail attachments.		
28.09 Identify privacy issues in the employee/employer relationship (e.g., avoid libel, spam, and personal usage).		
29.0 Demonstrate proficiency using operating systems--The student will be able to:		
29.01 Demonstrate proficiency with file management and structure (e.g., folder creation, file creation, backup, copy, delete, open, save).		
29.02 Describe the difference between relative and absolute path commands.		
29.03 Demonstrate a working knowledge of standard file formats.		
29.04 Demonstrate proficiency with help references.		
30.0 Demonstrate proficiency navigating the internet, intranet, and the WWW--The student will be able to:		
30.01 Identify and describe web terminology.		
30.02 Describe the history of the internet and intranet.		
30.03 Describe the difference between a client and a server.		
30.04 Describe the difference between the internet, intranet, and www.		
30.05 Describe the different methods by which information may be accessed on the internet/intranet (e.g., browser, FTP, gopher, telnet, veronica).		
30.06 List the available resources and services on the internet (e.g., electronic commerce, personal, government, business, etiquette, education, distance learning).		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
30.07 Locate information on the internet/intranet using a web browser.		
30.08 Copy information from the internet/intranet, save, and print using a web browser.		
30.09 Demonstrate proficiency in using the basic features of GUI browsers (e.g., setting bookmarks, basic configurations, e-mail configurations, address book).		
30.10 Define universal resource locators (URL's associated protocols (e.g., .COM, .ORG, .EDU, .GOV, .NET, .MIL)).		
30.11 Identify and use search engines to locate information.		
30.12 Describe the various ways of communicating on the internet/intranet (e.g., e-mail, forums, IRC, chat, listserv, USENET, moos, etc.).		
30.13 Describe and observe internet/intranet ethics and copyright laws.		
30.14 Identify methods to protect personal copyright.		
31.0 Demonstrate proficiency using HTML commands--The student will be able to:		
31.01 Identify elements of a web page.		
31.02 Describe individual web page layouts and content (e.g., writing for the web, web structure).		
31.03 Define basic HTML terminology.		
31.04 Analyze html source code developed by others.		
31.05 Create a web page using basic html tags (e.g., links, lists, character styles, text alignment, tables).		
31.06 Use storyboarding techniques for subsequent web pages (e.g., linear, hierarchical).		
31.07 Add graphics to web pages.		
31.08 Edit and test html documents for accuracy and validity.		
31.09 Use basic functions of HTML editors and converters.		
31.10 Use basic functions of WYSIWYG editors.		
32.0 Demonstrate proficiency in page design applicable to the WWW--The student will be able to:		
32.01 Develop an awareness of acceptable web page design, including index pages in relation to the rest of the web site.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
32.02 Describe and apply color theory as it applies to web page design (e.g., background and text color).		
32.03 Identify and convert graphic formats.		
32.04 Access and digitize graphics through various resources (e.g., scanner, digital cameras, on-line graphics, clipart, CD ROMS).		
32.05 Use image design software to create and edit images.		
33.0 Develop an awareness of internet/intranet tools--The student will be able to:		
33.01 Describe the various hardware components used on the internet/intranet.		
33.02 Demonstrate the use of compression programs.		
33.03 Demonstrate the use of backups.		

**Florida Department of Education
Student Performance Standards**

Course Title: Foundations of Web Design
Course Number: 9001110
Course Credit: 1

Course Description:

This course is designed to provide students with opportunities to acquire and apply foundational skills related to web design.

Abbreviations:

FS-M/LA = Florida Standards for Math/Language Arts
 NGSSS-Sci = Next Generation Sunshine State Standards for Science

Note: This course is pending alignment in the following categories: FS-LA

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
34.0 Demonstrate proficiency setting website project requirements during the design phase and project planning phase of Web development. – The student will be able to:		
34.01 Define information architecture.		
34.02 Discuss the importance of information architecture to web design and development.		
34.03 Conduct a client interview to determine the business purpose and needs.		
34.04 Conduct a competitive analysis.		
34.05 Describe the activities performed during the design phase and project planning phase of website development.		
34.06 Demonstrate basic design principles (e.g., use of colors, proximity, rule of thirds, white space in the design of a website).		
34.07 Define the site structure by creating a content map, site map, storyboard, associated wireframes, and web design comp for client approval.	MAFS.912.G-MG.1.3	
34.08 Analyze and evaluate global site maps.		
34.09 Discuss the legal and ethical issues (e.g., copyright laws, obtaining permission, public domain, proper citations) related to Web design.		SC.912.L.16.10
34.10 Describe accessibility and its implications on web design.		

CTE Standards and Benchmarks	FS-M/LA	NGSS-Sci
34.11 Identify the client and target audience needs, as well as the purpose of a website.		
34.12 Describe project management responsibilities.		
34.13 Define website project scope and scope creep.		
34.14 Determine deadlines and deliverables for a website project.		
34.15 Discuss Americans with Disabilities Act (ADA) standards for accessibility.		
35.0 Demonstrate proficiency creating a logical website file structure. – The student will be able to:		
35.01 Create an efficient, maintainable directory structure for a website, including the site root and subfolders for assets (e.g., images, templates, CSS).		
35.02 Demonstrate and use correct file paths for relative, site root relative, and absolute links.		
35.03 Apply acceptable and logical website file naming conventions (e.g., index.html, comments.htm, about_us.htm).		
35.04 Examine emerging and new markup languages.		
35.05 Determine browser or platform compatibility as it relates to Web page design.		
35.06 Identify common DOCTYPES (e.g., Strict, Transitional and Frameset, and HTML5) and describe their appropriate use.		
35.07 Understand the purpose and placement of Metadata in a web site.		
36.0 Create basic webpages that meet the industry standards as set forth by the W3C (World Wide Web Consortium). – The student will be able to:		
36.01 Create basic webpage structures using common markup elements and attributes.		
36.02 Incorporate list structures in a webpage (e.g., ordered, unordered, definition, nested).		
36.03 Incorporate hyperlinks in a webpage (e.g., external, internal, email, named anchors, id Attribute).		
36.04 Describe the influence of the W3C in the Web development industry.		
36.05 Write proper Web page syntax using tags and attributes that meet the standards set forth by the W3C.		
36.06 Incorporate common Web page elements and attributes in a Web page (e.g., title, comment tags, id).		
36.07 Differentiate between absolute and relative links used in a Web page.		

CTE Standards and Benchmarks	FS-M/LA	NGSS-Sci
36.08 Define and incorporate the target attribute for hyperlinks suitable for its purpose.		
36.09 Use the HTML AUDIO and VIDEO tags to display a media file on the webpages.		
37.0 Incorporate images and graphical formatting on a webpage. – The student will be able to:		
37.01 Describe usage guidelines (e.g., format types, size, relevance) for integrating images and graphics onto a webpage.		
37.02 Compare and contrast standard image formats used in webpage design.	MAFS.912.S-CP.1.1	
37.03 Incorporate graphics into a webpage design.		
37.04 Create and incorporate image maps in a webpage.		
37.05 Optimize images and graphics for use in a webpage.		
38.0 Create a basic table structure. – The student will be able to:		
38.01 Describe how tables are used in web design.		SC.912.N.1.1
38.02 Discuss the advantages and disadvantages of incorporating tables in a webpage design.		SC.912.N.1.1
38.03 Define and modify table structures for the presentation of tabular information.	MAFS.912.G-MG.1.3	SC.912.N.1.1
38.04 Create accessible tables using standard table elements and attributes.		SC.912.N.1.1
39.0 Incorporate form structures in a webpage. – The student will be able to:		
39.01 Create an accessible form using common elements, including form, fieldset, legend, textarea, select, option, button, labels, and input (radio, checkbox, submit, reset, image, password, hidden).		
39.02 Describe and diagram the relationship between HTML forms and server-side technologies.		
39.03 Compare and contrast the GET and POST methods for forms handling.		
39.04 Define form validation and describe how it is accomplished.		
39.05 List popular server-side technologies often used to process content sent from HTML forms.		
39.06 Connect a HTML form to a server-side script for processing.		
40.0 Discuss appropriate use of frame structures and their outdated usage. – The student will be able to:		

CTE Standards and Benchmarks	FS-M/LA	NGSS-Sci
40.01 Discuss using frames and iframe structures and the related security vulnerabilities		
40.02 Describe appropriate uses of iframes.		
41.0 Understand the basic principles of Cascading Style Sheets-CSS. – The student will be able to:		
41.01 Define the purpose of CSS and describe its importance in web design.		
41.02 Discuss existing and emerging CSS versions.		
41.03 Explain how inheritance and specificity affect CSS rule conflicts.		
41.04 Discuss the different placement of CSS (e.g., inline, external, embedded).		
42.0 Use CSS to create basic webpages based on industry standards. – The student will be able to:		
42.01 Recognize and use element selectors, ID selectors, class selectors, pseudo-class selectors, and descendant selectors.		
42.02 Explain how inheritance and specificity affect CSS rule conflicts.		
42.03 Use inline, internal and external style sheets.		
42.04 Use the link and import methods to connect to an external style sheet.		
42.05 Apply basic CSS properties (background, border, color, float, font, height, line-height, list-style, margin, overflow, padding, text-align, text-indent, width, padding).		
42.06 Use CSS to style tables (e.g., borders, width, spacing, alignment, background).	MAFS.912.G-MG.1.3	
42.07 Use CSS to enhance the appearance and usability of an HTML form.		
43.0 Develop website page layout using AP (Absolute Positioning) elements. – The student will be able to:		
43.01 Compare and contrast positioning types on a webpage.		
43.02 Describe the usage of AP elements in a webpage.		
43.03 Incorporate AP elements in a web page layout using appropriate Div tags.		
43.04 Discuss the benefits and drawbacks of using AP elements for Web page layouts.		
43.05 Determine how the stacking order and z-index impact Web pages created with AP elements.		
44.0 Examine web design technologies and techniques. – The student will be able to:		

CTE Standards and Benchmarks	FS-M/LA	NGSS-Sci
44.01 Discuss client-side and server-side technologies.		
44.02 Define e-commerce types and usage.		
44.03 Describe database connectivity relative to websites.		
45.0 Describe the process for publishing a website. – The student will be able to:		
45.01 Explore domain name selection process.		
45.02 Identify process to registering a domain name.		
45.03 Compare and contrast hosting providers, features, and selection criteria.	MAFS.912.S-CP.1.1	
45.04 Describe the various means for uploading website files (e.g., FTP, web-based tools).		
46.0 Describe how website performance is monitored and analyzed. – The student will be able to:		
46.01 Identify issues related to website maintenance.		
46.02 Use webpage validation tools.		SC.912.N.1.1
46.03 Describe website performance metrics (e.g., visits, time-on-page, time-on-site) and discuss their design implications.		
46.04 Demonstrate knowledge of accessibility problems and solutions.		
46.05 Discuss current basic Search Engine Optimization techniques.		
46.06 Explore common website analytic tools.		
47.0 Create an informational website that conforms to industry standards as set forth by the W3C. – The student will be able to:		
47.01 Use GUI (Graphical User Interface) web authoring software to create a multi-page informational website.		
47.02 Use image-editing software to enhance website designs with simple graphics.		
47.03 Use animation software to enhance website designs.		
47.04 Enhance the website using client-side technologies (navigation bars, rollover images or text, check plug-ins).		
48.0 Demonstrate efficient, consistent website development practice (use of templates, snippets). – The student will be able to:		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
48.01 Produce website designs that would work equally well on various operating systems and platforms, browser versions/configurations, and devices.		
48.02 Describe various file formats that can be imported onto a website (tabular data, word processing, presentation, PDFs).		
49.0 Demonstrate language arts knowledge and skills. – The student will be able to:		
49.01 Locate, comprehend and evaluate key elements of oral and written information.		
49.02 Draft, revise, and edit written documents using correct grammar, punctuation and vocabulary.		
49.03 Present information formally and informally for specific purposes and audiences.		
50.0 Demonstrate mathematics knowledge and skills. – The student will be able to:		
50.01 Demonstrate knowledge of arithmetic operations.		
50.02 Analyze and apply data and measurements to solve problems and interpret documents.	MAFS.912.A-REI.1.1	SC.912.N.1.1
50.03 Construct charts/tables/graphs using functions and data.	MAFS.912.F-IF.2.4	SC.912.N.1.1

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)

SkillsUSA is the intercurricular career and technical student organization(s) 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.

MyCareerShines is an interactive resource to assist students in identifying their ideal career and to enhance preparation for employment. Teachers are encouraged to integrate this resource into the program curriculum to meet the employability goals for each student.

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 Occupational Completion Point (OCP) or a Modified Occupational Completion Point (MOCP). 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 an OCP/MOCP. The student should work on different competencies and new applications of competencies each year toward completion of the OCP/MOCP. 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: Commercial Photography Technology
Program Type: Career Preparatory
Career Cluster: Arts, A/V Technology and Communication

Secondary – Career Preparatory

Program Number	8772000
CIP Number	0650040600
Grade Level	9-12
Standard Length	11 credits
Teacher Certification	Refer to the <u>Program Structure</u> section.
CTSO	SkillsUSA
SOC Codes (all applicable)	27-4021 – Photographers 51-9151 – Photographic Process Workers and Processing Machine Operators

Purpose

The purpose of this program is to prepare students for employment as photographers.

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 Arts, A/V Technology and Communication 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 Arts, A/V Technology and Communication career cluster.

The content includes, but is not limited to, communication skills, leadership skills, human relations and employability skills, safe and efficient work practices, and the use of cameras and laboratory film-processing techniques in portrait, commercial and industrial applications with emphasis on composition and color dynamics, contact printing, enlarging and developing film, and use, care, and maintenance of photographic 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 four 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 secondary program structure:

OCP	Course Number	Course Title	Teacher Certification	Length	SOC Code	Level	Graduation Requirement
A	8772010	Commercial Photography Technology 1	PHOTOG @7 7G	1 credit		2	PA
	8772020	Commercial Photography Technology 2		1 credit		2	PA
	8772030	Commercial Photography Technology 3		1 credit		2	PA
	8772040	Commercial Photography Technology 4		1 credit		51-9151	2
B	8772050	Commercial Photography Technology 5		1 credit	51-9151	2	PA
	8772060	Commercial Photography Technology 6		1 credit		2	PA
	8772070	Commercial Photography Technology 7		1 credit		2	PA
C	8772080	Commercial Photography Technology 8		1 credit	27-4021	2	PA
	8772090	Commercial Photography Technology 9		1 credit		2	PA
	8772091	Commercial Photography Technology 10		1 credit		2	PA
D	8772092	Commercial Photography Technology 11		1 credit	27-4021	2	PA

(Graduation Requirement Abbreviations- EQ= Equally Rigorous Science, PA= Practical Arts, EC= Economics)

Florida Standards for Technical Subjects

Florida Standards (FS) for English Language Arts and Literacy in History/Social Studies, Science, and Technical Subjects are the critical reading and writing literacy standards designed for grade 6 and above. These standards are predicated on teachers of history/social studies, science, and technical subjects using their content area expertise to help students meet the particular challenges of reading, writing, speaking, listening, and language in their respective fields. The FS for Mathematical Practices are designed for grades K-12 and describe varieties of expertise that educators at all levels should seek to develop in their students. These practices rest on important “processes and proficiencies” with longstanding importance in mathematics education.

Instructors must incorporate the Florida Standards for Technical Subjects and Mathematical Practices throughout instruction of this CTE program.

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.

Common Career Technical Core – Career Ready Practices

Career Ready Practices describe the career-ready skills that educators should seek to develop in their students. These practices are not exclusive to a Career Pathway, program of study, discipline or level of education. Career Ready Practices should be taught and reinforced in all career exploration and preparation programs with increasingly higher levels of complexity and expectation as a student advances through a program of study.

1. Act as a responsible and contributing citizen and employee.
2. Apply appropriate academic and technical skills.
3. Attend to personal health and financial well-being.
4. Communicate clearly, effectively and with reason.
5. Consider the environmental, social and economic impacts of decisions.
6. Demonstrate creativity and innovation.
7. Employ valid and reliable research strategies.
8. Utilize critical thinking to make sense of problems and persevere in solving them.
9. Model integrity, ethical leadership and effective management.
10. Plan education and career path aligned to personal goals.
11. Use technology to enhance productivity.
12. Work productively in teams while using cultural/global competence.

Standards

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

- 01.0 Perform laboratory skills.
- 02.0 Manage a photographic business.
- 03.0 Control exposures (35mm camera).
- 04.0 Take basic photographs (35mm camera).
- 05.0 Finish photographs.
- 06.0 Apply lighting techniques.
- 07.0 Reproduce photographic media.
- 08.0 Demonstrate appropriate communication skills.
- 09.0 Reproduce transparencies and internegatives.
- 10.0 Operate various format cameras.
- 11.0 Process color images.
- 12.0 Procure color photographs.
- 13.0 Take studio photographs.
- 14.0 Produce media presentations.
- 15.0 Use digital imaging.

**Florida Department of Education
Student Performance Standards**

Course Title: Commercial Photography Technology 1
Course Number: 8772010
Course Credit: 1

Course Description:

This course is one in a series of eleven courses. This is the introductory course in 35mm Camera Operation. The use of various light meters in the 35mm cameras as well as hand held light meters will be reviewed. Focusing systems are considered. Film types are compared to lighting conditions for proper exposures. Film loading and unloading are considered. The reciprocal value of apertures and shutter speeds are examined.

Abbreviations:

FS-M/LA = Florida Standards for Math/Language Arts
 NGSSS-Sci = Next Generation Sunshine State Standards for Science

Note: This course is pending alignment in the following categories: FS-M/LA and NGSSS-Sci.

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
01.0 Perform laboratory skills--The student will be able to:		
01.01 Mix developers and other chemicals.		
01.02 Hand-process black and white film.		
01.03 Print black and white photographs.		
01.04 Process black and white paper.		
02.0 Manage the photographic business--The student will be able to:		
02.01 Apply communication skills.		
02.02 Apply human relation skills.		
02.03 Set rates for photographic work.		
02.04 Maintain shop records and files.		

CTE Standards and Benchmarks	FS-M/LA	NGSS-Sci
02.05 Maintain presentational portfolio		

**Florida Department of Education
Student Performance Standards**

Course Title: Commercial Photography Technology 2
Course Number: 8772020
Course Credit: 1

Course Description:

This course is one in a series of eleven courses. The guidelines of composing within the photographic frame are discussed. Posing one or more subjects for portraiture in the studio is considered. The guidelines for setting up a still life are introduced. Other rules for arranging groups, determining format, color harmony, and perspective are introduced.

Abbreviations:

FS-M/LA = Florida Standards for Math/Language Arts
 NGSSS-Sci = Next Generation Sunshine State Standards for Science

Note: This course is pending alignment in the following categories: FS-M/LA and NGSSS-Sci.

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
03.0 Control exposures (35mm camera)--The student will be able to:		
03.01 Set appropriate f-stop and shutter speeds.		
03.02 Select appropriate film type.		
04.0 Take basic photographs (35mm camera)--The student will be able to:		
04.01 Apply camera care and maintenance principles.		
04.02 Compose photographs.		
04.03 Take still photographs.		
04.04 Take action photographs.		
05.0 Finish photographs--The student will be able to:		
05.01 Mount photographs.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
05.02 Mat/frame photographs.		
06.0 Apply lighting techniques--The student will be able to:		
06.01 Take photographs with available light.		
06.02 Take photographs with electronic strobe.		
06.03 Take photographs with photo-flood lighting.		
07.0 Reproduce photographic media--The student will be able to:		
07.01 Copy prints.		

**Florida Department of Education
Student Performance Standards**

Course Title: Commercial Photography Technology 3
Course Number: 8772030
Course Credit: 1

Course Description:

This is one course in a series of eleven courses. This course is designed to expose the student to lighting techniques the coping of prints and employability skills.

Abbreviations:

FS-M/LA = Florida Standards for Math/Language Arts
 NGSSS-Sci = Next Generation Sunshine State Standards for Science

Note: This course is pending alignment in the following categories: FS-M/LA and NGSSS-Sci.

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
02.0 Manage the photographic business--The student will be able to:		
02.01 Apply communication skills.		
02.02 Apply human relation skills.		
02.03 Set rates for photographic work.		
02.04 Maintain shop records and files.		
02.05 Maintain presentational portfolio		
06.0 Apply lighting techniques--The student will be able to:		
06.01 Take photographs with available light.		
06.02 Take photographs with electronic strobe.		
06.03 Take photographs with photo-flood lighting.		
07.0 Reproduce photographic media--The student will be able to:		

CTE Standards and Benchmarks	FS-M/LA	NGSS-Sci
07.01 Copy prints		

**Florida Department of Education
Student Performance Standards**

Course Title: Commercial Photography Technology 4
Course Number: 8772040
Course Credit: 1

Course Description:

This is one course in a series of eleven courses. This course is designed to expose the student in advanced instruction in the use of commercial cameras and reproduce photographic media.

Abbreviations:

FS-M/LA = Florida Standards for Math/Language Arts
 NGSSS-Sci = Next Generation Sunshine State Standards for Science

Note: This course is pending alignment in the following categories: FS-M/LA and NGSSS-Sci.

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
09.0 Reproduce transparencies and internegatives--The student will be able to:		
09.01 Scan transparencies.		
09.02 Scan internegatives.		
10.0 Operate various format cameras--The student will be able to:		
10.01 Use view cameras.		

**Florida Department of Education
Student Performance Standards**

Course Title: Commercial Photography Technology 5
Course Number: 8772050
Course Credit: 1

Course Description:

This is one course in a series of eleven courses. This course is designed to expose the student in advanced instruction in the processing of color film and print color photographs.

Abbreviations:

FS-M/LA = Florida Standards for Math/Language Arts
 NGSSS-Sci = Next Generation Sunshine State Standards for Science

Note: This course is pending alignment in the following categories: FS-M/LA and NGSSS-Sci.

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
11.0 Process color images--The student will be able to:		
11.01 Hand process color negatives and transparencies. (optional)		
11.02 Process color negatives and transparencies. (optional)		
11.03 Down load images to a computer.		
11.04 Save images in a computer to an external storage device.		
12.0 Procure color photographs--The student will be able to:		
12.01 Process color paper. (optional)		
12.02 Print color negatives. (optional)		
12.03 Print color negatives using color analyzer. (optional)		
12.04 Purchase color mediums		
12.05 Calibrate a computer monitor		

CTE Standards and Benchmarks	FS-M/LA	NGSS-Sci
12.06 Analyze a color print for correct color and contrast.		

**Florida Department of Education
Student Performance Standards**

Course Title: Commercial Photography Technology 6
Course Number: 8772060
Course Credit: 1

Course Description:

This is one course in a series of eleven courses. This course covers the operation of various format cameras and to demonstrate appropriate communication skills.

Abbreviations:

FS-M/LA = Florida Standards for Math/Language Arts
 NGSSS-Sci = Next Generation Sunshine State Standards for Science

Note: This course is pending alignment in the following categories: FS-M/LA and NGSSS-Sci.

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
08.0 Demonstrate appropriate communication skills--The student will be able to:		
14.01 Write logical and understandable statements, or phrases, to accurately fill out forms/invoices commonly used in business and industry.		
14.02 Read and understand graphs, charts, diagrams, and tables commonly used in this industry/occupation area.		
14.03 Read and follow written and oral instructions.		
10.0 Operate various format cameras--The student will be able to:		
16.01 Use 2¼ format cameras.		

**Florida Department of Education
Student Performance Standards**

Course Title: Commercial Photography Technology 7
Course Number: 8772070
Course Credit: 1

Course Description:

This is one course in a series of eleven courses. The uses of studio lights are reviewed for commercial photography. Formal portraiture lighting, as well as electronic strobes are examined.

Abbreviations:

FS-M/LA = Florida Standards for Math/Language Arts
 NGSSS-Sci = Next Generation Sunshine State Standards for Science

Note: This course is pending alignment in the following categories: FS-M/LA and NGSSS-Sci.

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
08.0 Demonstrate appropriate communication skills--The student will be able to:		
8.01 Write logical and understandable statements, or phrases, to accurately fill out forms/invoices commonly used in business and industry.		
8.02 Read and understand graphs, charts, diagrams, and tables commonly used in this industry/occupation area.		
8.03 Read and follow written and oral instructions.		
13.0 Take studio photographs--The student will be able to:		
13.01 Take portraits.		

**Florida Department of Education
Student Performance Standards**

Course Title: Commercial Photography Technology 8
Course Number: 8772080
Course Credit: 1

Course Description:

This is one course in a series of eleven courses. This course covers the methods and practices currently used for digital photography to include the computer usage and software to manipulate photographs.

Abbreviations:

FS-M/LA = Florida Standards for Math/Language Arts
 NGSSS-Sci = Next Generation Sunshine State Standards for Science

Note: This course is pending alignment in the following categories: FS-M/LA and NGSSS-Sci.

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
15.0 Use digital imaging--The student will be able to:		
15.01 Use basic photographic computer skills.		
15.02 Use a professional imaging program.		
15.03 Use a flatbed and film scanner.		
15.04 Output photographic quality images using a digital printer.		
15.05 Use digital camera.		

**Florida Department of Education
Student Performance Standards**

Course Title: Commercial Photography Technology 9
Course Number: 8772090
Course Credit: 1

Course Description:

This is one course in a series of eleven courses. This course covers aspects of commercial photography.

Abbreviations:

FS-M/LA = Florida Standards for Math/Language Arts
 NGSSS-Sci = Next Generation Sunshine State Standards for Science

Note: This course is pending alignment in the following categories: FS-M/LA and NGSSS-Sci.

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
13.0 Take studio photographs--The student will be able to:		
13.02 Take commercial photographs.		

**Florida Department of Education
Student Performance Standards**

Course Title: Commercial Photography Technology 10
Course Number: 8772091
Course Credit: 1

Course Description:

This is one course in a series of eleven courses. This course covers methods of preparing media presentations.

Abbreviations:

FS-M/LA = Florida Standards for Math/Language Arts

NGSSS-Sci = Next Generation Sunshine State Standards for Science

Note: This course is pending alignment in the following categories: FS-M/LA and NGSSS-Sci.

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
14.0 Produce media presentations--The student will be able to:		
14.01 Prepare script for a slide presentation.		
14.02 Shoot slides for a slide presentation.		
14.03 Produce a slide presentation.		

**Florida Department of Education
Student Performance Standards**

Course Title: Commercial Photography Technology 11
Course Number: 8772092
Course Credit: 1

Course Description:

This is one course in a series of eleven courses. This course covers methods of preparing media presentations and the basics of entrepreneurship.

Abbreviations:

FS-M/LA = Florida Standards for Math/Language Arts
 NGSSS-Sci = Next Generation Sunshine State Standards for Science

Note: This course is pending alignment in the following categories: FS-M/LA and NGSSS-Sci.

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
14.0 Produce media presentations--The student will be able to:		
14.04 Prepare script for a video presentation.		
14.05 Shoot a video presentation.		
14.06 Produce a video presentation.		

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 occupational standards and benchmarks outlined in this secondary program correlate to the standards and benchmarks of the postsecondary program with the same Classification of Instructional Programs (CIP) number.

MyCareerShines is an interactive resource to assist students in identifying their ideal career and to enhance preparation for employment. Teachers are encouraged to integrate this resource into the program curriculum to meet the employability goals for each student.

Career and Technical Student Organization (CTSO)

SkillsUSA is the intercurricular career and technical student organization(s) 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.

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 Occupational Completion Point (OCP) or a Modified Occupational Completion Point (MOCP). 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 an OCP/MOCP. The student should work on different competencies and new applications of competencies each year toward completion of the OCP/MOCP. 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: Digital Audio Production
Program Type: Career Preparatory
Career Cluster: Arts, A/V Technology and Communication

Secondary – Career Preparatory

Program Number	8772300
CIP Number	0650060223
Grade Level	9-12
Standard Length	7 credits
Teacher Certification	Refer to the <u>Program Structure</u> section.
CTSO	SkillsUSA
SOC Codes (all applicable)	27-3011 – Radio and Television Announcers 27-4011 – Audio and Video Equipment Technicians 27-4012 – Broadcast Technicians 27-4014 – Sound Engineering Technicians

Purpose

The purpose of this program is to prepare students for initial employment as radio and television announcers, audio and video equipment technicians, sound engineering technicians, and broadcast technicians.

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 Arts, A/V Technology and Communication 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 Arts, A/V Technology and Communication career cluster.

The content includes, but is not limited to, communication skills, leadership skills, human relations and employability skills; safe and efficient work practices; announcing and moderating programs; preparing copy, programming, and operating audio broadcast equipment to support the production of materials or programs.

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 four 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 secondary program structure:

OCP	Course Number	Course Title	Teacher Certification	Length	SOC Code	Level	Graduation Requirement
A	8772310	Digital Audio Production 1	TEC ED 1 @ 2 ENG&TEC ED1@2 TEC ELEC ↑ 7 ↑ G TV PRO TEC @7 7G	1 credit	27-3011	2	PA
B	8772320	Digital Audio Production 2		1 credit	27-4011	2	PA
	8772330	Digital Audio Production 3		1 credit		2	PA
C	8772340	Digital Audio Production 4		1 credit	27-4014	2	PA
	8772350	Digital Audio Production 5		1 credit		2	PA
D	8772360	Digital Audio Production 6		1 credit	27-4012	2	PA
	8772370	Digital Audio Production 7		1 credit		2	PA

(Graduation Requirement Abbreviations- EQ= Equally Rigorous Science, PA= Practical Arts, EC= Economics)

Academic Alignment Table

Academic alignment is an ongoing, collaborative effort of professional educators specializing in the fields of science, mathematics, English/language arts, and Career and Technical Education (CTE). This initiative supports CTE programs by improving student performance through the integration of academic content within CTE courses. Career and Technical Education courses that have been aligned to the Next Generation Sunshine State Standards for Science and the Florida Standards for Mathematics and English/Language Arts will show the following data: the quantity of academic standards in the CTE course; the total number of standards contained in the academic course; and the percentage of alignment to the CTE course.

Courses	Anatomy/ Physiology Honors	Astronomy Solar/Galactic Honors	Biology 1	Chemistry 1	Earth- Space Science	Environmental Science	Genetics	Integrated Science	Marine Science 1 Honors	Physical Science	Physics 1
8772310	1/87 1%	4/80 5%	1/83 1%	3/69 4%	4/67 6%	1/70 1%	1/69 1%	1/82 1%	1/66 2%	5/74 7%	6/72 8%
8772320	1/87 1%	7/80 9%	21/83 25%	5/69 7%	24/67 36%	4/70 6%	1/69 1%	23/82 28%	6/66 9%	25/74 34%	6/72 8%
8772330	20/87 23%	22/80 28%	1/83 1%	20/69 29%	2/67 3%	20/70 29%	20/69 29%	2/82 2%	16/66 24%	2/74 3%	22/72 31%
8772340	20/87 23%	21/80 26%	1/83 1%	20/69 29%	1/67 1%	20/70 29%	20/69 29%	1/82 1%	15/66 23%	2/74 3%	21/72 29%
8772350	1/87 1%	2/80 3%	1/83 1%	1/69 1%	1/67 1%	1/70 1%	1/69 1%	1/82 1%	1/66 2%	2/74 3%	2/72 3%
8772360	1/87 1%	1/80 1%	1/83 1%	1/69 1%	1/67 1%	1/70 1%	1/69 1%	1/82 1%	1/66 2%	1/74 1%	1/72 1%

8772370	1/87 1%	1/80 1%	1/83 1%	1/69 1%	1/67 1%	1/70 1%	1/69 1%	1/82 1%	1/66 2%	1/74 1%	1/72 1%
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** Alignment pending review

Alignment attempted, but no correlation to academic course

Courses	Algebra 1	Algebra 2	Geometry	English 1	English 2	English 3	English 4
8772310	**	**	**	**	**	**	**
8772320	**	**	**	**	**	**	**
8772330	**	**	**	**	**	**	**
8772340	**	**	**	**	**	**	**
8772350	**	**	**	**	**	**	**
8772360	**	**	**	**	**	**	**
8772370	**	**	**	**	**	**	**

** Alignment pending review

Alignment attempted, but no correlation to academic course

Florida Standards for Technical Subjects

Florida Standards (FS) for English Language Arts and Literacy in History/Social Studies, Science, and Technical Subjects are the critical reading and writing literacy standards designed for grade 6 and above. These standards are predicated on teachers of history/social studies, science, and technical subjects using their content area expertise to help students meet the particular challenges of reading, writing, speaking, listening, and language in their respective fields. The FS for Mathematical Practices are designed for grades K-12 and describe varieties of expertise that educators at all levels should seek to develop in their students. These practices rest on important “processes and proficiencies” with longstanding importance in mathematics education.

Instructors must incorporate the Florida Standards for Technical Subjects and Mathematical Practices throughout instruction of this CTE program.

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.

Common Career Technical Core – Career Ready Practices

Career Ready Practices describe the career-ready skills that educators should seek to develop in their students. These practices are not exclusive to a Career Pathway, program of study, discipline or level of education. Career Ready Practices should be taught and reinforced in all career exploration and preparation programs with increasingly higher levels of complexity and expectation as a student advances through a program of study.

1. Act as a responsible and contributing citizen and employee.
2. Apply appropriate academic and technical skills.
3. Attend to personal health and financial well-being.
4. Communicate clearly, effectively and with reason.
5. Consider the environmental, social and economic impacts of decisions.
6. Demonstrate creativity and innovation.
7. Employ valid and reliable research strategies.
8. Utilize critical thinking to make sense of problems and persevere in solving them.
9. Model integrity, ethical leadership and effective management.
10. Plan education and career path aligned to personal goals.
11. Use technology to enhance productivity.
12. Work productively in teams while using cultural/global competence.

Standards

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

- 01.0 Demonstrate knowledge of school and classroom procedures.
- 02.0 Demonstrate the ability to operate an audio console.
- 03.0 Demonstrate knowledge of production writing.
- 04.0 Demonstrate news-writing skills.
- 05.0 Demonstrate appropriate voice-over skills.
- 06.0 Demonstrate appropriate on-air skills.
- 07.0 Demonstrate the appropriate broadcast speaking manner.
- 08.0 Demonstrate the set up and configuration of a computer for audio applications.
- 09.0 Understand the operation of basic reproduction, reinforcement and recording audio equipment.
- 10.0 Demonstrate understanding of the requirements for set up and operation of a sound reinforcement system.
- 11.0 Demonstrate the application of control protocols and their relationship to equipment used in the music industry.
- 12.0 Demonstrate basic operation of a digital audio workstation.
- 13.0 Demonstrate basic digital production skills.
- 14.0 Demonstrate advanced digital production skills.
- 15.0 Perform transactions with music industry suppliers.
- 16.0 Plan, coordinate, and manage an audio broadcast or album.
- 17.0 Demonstrate knowledge of the legal issues related to copyright.
- 18.0 Demonstrate knowledge of current and future digital audio networking standards.
- 19.0 Demonstrate professionalism and employability skills.

Florida Department of Education
Student Performance Standards

Course Title: Digital Audio Production 1
Course Number: 8772310
Course Credit: 1

Course Description:

The course provides competencies in operating audio consoles, production writing, news writing, and voice over and on-air skills.

Abbreviations:

FS-M/LA = Florida Standards for Math/Language Arts
NGSSS-Sci = Next Generation Sunshine State Standards for Science

Note: This course is pending alignment in the following categories: FS-M/LA.

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
01.0 Demonstrate knowledge of school and classroom procedures – the student will be able to:		SC.912.N.1.1; SC.912.P.10.5; SC.912.P.10.16; SC.912.P.10.13; SC.912.P.10.17; SC.912.P.10.18; SC.912.P.10.21; SC.912.P.12.2
01.01 Verbalize the rules and operational procedures of the school and classroom.		
01.02 State the nature of instruction.		
01.03 Identify what will be learned in relation to stated goals and existing job opportunities.		
02.0 Demonstrate the ability to operate an audio console – the student will be able to:		SC.912.P.10.21
02.01 Demonstrate an ability to control the audio console during the recording of a show or program; combine all the sound elements onto tape, compact disc or for broadcast.		
02.02 Route outside organizations through the audio console or computer.		
02.03 Demonstrate application of an appropriate recording mix while adjusting audio levels.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
02.04 Demonstrate the ability to keep the program on time according to the production plan.		
02.05 Perform to high standards in the role of audio console operator in varied format situations.		
02.06 Demonstrate knowledge of the audio console signal flow.		
03.0 Demonstrate knowledge of production writing – the student will be able to:		
03.01 Explain the job of a copywriter and outline the elements of good copy and copy writing.		
03.02 Demonstrate the ability to write commercial copy in its various forms.		
03.03 Demonstrate the ability to write a production plan for a show.		
03.04 Demonstrate the ability to write lyrics for a song or jingle.		
03.05 Demonstrate the ability to write show intros, outros and bumpers.		
04.0 Demonstrate news-writing skills – the student will be able to:		
04.01 Differentiate between news, commentary, and editorials.		
04.02 Demonstrate the ability to mark, edit, and present news in an acceptable manner.		
04.03 Explain the various sources of news and how they are used.		
04.04 List the elements that constitute news materials and evaluate them.		
04.05 Demonstrate the ability to write news stories in broadcast style.		
05.0 Demonstrate appropriate voice-over skills – the student will be able to:		
05.01 Demonstrate the ability to read aloud in a professional broadcast manner.		
05.02 Modify reading speed as required to properly complete the assignment in the allotted time.		
05.03 Demonstrate the ability to receive and properly act upon direction given by the commercial producer.		
05.04 Understand the concept of voice acting and playing a role while speaking.		
05.05 Perform various assignments in a professional manner according to industry standards.		
06.0 Demonstrate appropriate on-air skills – the student will be able to:		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
06.01 State the characteristics of various microphones and demonstrate the ability to use them.		
06.02 Handle outside organizations through the console.		
06.03 Demonstrate how to handle changes in show format during a recording or live broadcast.		
06.04 Perform various assignments in a professional manner according to industry standards.		
06.05 List the elements and procedures of log keeping.		
07.0 Demonstrate the appropriate broadcast speaking manner – the student will be able to:		
07.01 Identify and correct verbal deficiencies in self and others.		
07.02 Demonstrate the ability to breathe properly, control voice projection, volume, and resonance, and vary tone, pitch and pacing.		
07.03 Articulate and pronounce words according to accepted standards.		
07.04 Read aloud in a professional broadcast manner.		
07.05 Outline the qualifications and requirements of an announcer.		
07.06 Demonstrate development of the skills related to announcing, the various techniques of delivery and procedures according to accepted standards.		

**Florida Department of Education
Student Performance Standards**

Course Title: Digital Audio Production 2
Course Number: 8772320
Course Credit: 1

Course Description:

This course provides competencies in the set up and configuration of a computer for audio applications and the operation of audio equipment.

Abbreviations:

FS-M/LA = Florida Standards for Math/Language Arts
 NGSSS-Sci = Next Generation Sunshine State Standards for Science

Note: This course is pending alignment in the following categories: FS-M/LA.

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
08.0 Demonstrate the set up and configuration of a computer for audio applications – the student will be able to:		SC.912.N.1.1; SC.912.L.17.15; SC.912.P.10.20; SC.912.P.10.21
08.01 Install basic peripheral devices related to audio programs.		
08.02 Install and configure software related to audio programs.		
08.03 Demonstrate basic knowledge of computer system requirements.		
08.04 Demonstrate basic knowledge of installing plug-ins or additional audio source material such as beats and/or samples.		
08.05 Understand the signal flow of a digital audio workstation.		
09.0 Understand the operation of basic reproduction, reinforcement and recording audio equipment – the student will be able to:		SC.912.N.1.1
09.01 Assess the audio technology needs of a music production (pre-production).		
09.02 Evaluate available audio resources.		
09.03 Select and configure appropriate hardware and software.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
10.0 Demonstrate understanding of the requirements for set up and operation of a sound reinforcement system – the student will be able to:		SC.912.N.1.1; SC.912.N.1.4; SC.912.N.1.5; SC.912.N.1.7; SC.912.N.2.5; SC.912.P.10.20; SC.912.P.10.21
10.01 Demonstrate basic understanding of audio electronics (e.g., head room, biasing, distortion, equalization, frequency response).		
10.02 Demonstrate basic understanding of acoustics.		
10.03 Demonstrate knowledge of the principles of operation of analog/digital devices (block diagram).		
10.04 Demonstrate basic understanding of audio signal flow in an analog or digital chain.		
10.05 Formulate strategies for audio reinforcement of music productions.		
10.06 Evaluate performance needs.		
10.07 Evaluate technical needs as appropriate to given spaces.		
10.08 Configure a sound reinforcement system to meet performance needs.		
10.09 Analyze various audio qualities to achieve the proper sound mix.		
10.10 Perform transactions with audio suppliers.		
10.11 Design a plot for proper microphone and speaker selection and placement.		
10.12 Evaluate the quality of a multi-track recording.		
10.13 Interpret audio needs for the end user.		
10.14 Supervise equipment operators.		
10.15 Evaluate the quality of the final mix to industry standards.		

Florida Department of Education
Student Performance Standards

Course Title: Digital Audio Production 3
Course Number: 8772330
Course Credit: 1

Course Description:

This course covers competencies in digital audio production.

Abbreviations:

FS-M/LA = Florida Standards for Math/Language Arts

NGSSS-Sci = Next Generation Sunshine State Standards for Science

Note: This course is pending alignment in the following categories: FS-M/LA.

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
11.0 Demonstrate the application of control protocols and their relationship to equipment used in the music industry – the student will be able to:		SC.912.N.1.1
11.01 Demonstrate an understanding of MIDI.		
11.02 Utilize a computer and multiple MIDI instruments.		
11.03 Record a single-sound track, add multiple-sound tracks, and change MIDI voices using the appropriate software.		
12.0 Demonstrate basic operation of a digital audio workstation – the student will be able to:		SC.912.N.1.1; SC.912.P.10.20; SC.912.P.10.21
12.01 Demonstrate knowledge of the digital audio workstation interface.		
12.02 Create and arrange a multi-track project.		
12.03 Create interest and effect using editing techniques.		
12.04 Design and edit audio using a waveform editor.		
12.05 Record audio directly to the digital audio workstation.		
12.06 Demonstrate knowledge of mixing audio.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
12.07 Demonstrate skill in using audio effects and plug-ins.		
12.08 Prepare an audio project for finishing and final mix down.		
12.09 Transfer audio files between various audio software applications.		
12.10 Record finished audio to tape or compact disc and/or publish to a webpage.		
13.0 Demonstrate basic digital production skills – the student will be able to:		SC.912.N.1.1
13.01 Demonstrate understanding of digital audio storage concepts and digital storage media.		
13.02 Demonstrate knowledge of and the ability to operate digital recording decks and other digital storage devices.		
13.03 Demonstrate a working familiarity with and understanding of the function and operation of digital audio workstations.		
13.04 Demonstrate the ability to edit, cut, erase, and insert sound utilizing various digital production techniques.		

**Florida Department of Education
Student Performance Standards**

Course Title: Digital Audio Production 4
Course Number: 8772340
Course Credit: 1

Course Description:

This course provides competencies in the operation of basic reproduction, reinforcement and recording audio equipment.

Abbreviations:

FS-M/LA = Florida Standards for Math/Language Arts
 NGSSS-Sci = Next Generation Sunshine State Standards for Science

Note: This course is pending alignment in the following categories: FS-M/LA.

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
09.0 Understand the operation of basic reproduction, reinforcement and recording audio equipment – the student will be able to:		SC.912.N.1.1; SC.912.P.10.21
09.04 Formulate strategies for producing multi-track recordings.		
09.05 Evaluate production needs for microphone applications.		
09.06 Demonstrate proficiency with multi-track, multi-channel mixing consoles.		
09.07 Formulate strategies for digital editing.		
09.08 Configure audio recording systems for optimal and appropriate use of signal processing equipment.		
09.09 Engineer a recording session and prepare appropriate documentation.		
09.10 Mix multi-track recordings.		
09.11 Configure audio equipment for optimal musical mix.		
09.12 Create a mixing plan.		
09.13 Evaluate the quality of multi-track recordings.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
09.14 Interpret audio needs for the end user.		
09.15 Supervise equipment operators.		
09.16 Evaluate the quality of the final mix according to industry standards.		

**Florida Department of Education
Student Performance Standards**

Course Title: Digital Audio Production 5
Course Number: 8772350
Course Credit: 1

Course Description:

This course covers competencies in application of control protocols and their relationship to equipment used in the music industry and advanced digital production skills.

Abbreviations:

FS-M/LA = Florida Standards for Math/Language Arts
 NGSSS-Sci = Next Generation Sunshine State Standards for Science

Note: This course is pending alignment in the following categories: FS-M/LA.

CTE Standards and Benchmarks		FS-M/LA	NGSSS-Sci
11.0	Demonstrate the application of control protocols and their relationship to equipment used in the music industry – the student will be able to:		SC.912.N.1.1; SC.912.P.10.21
11.04	Demonstrate proficiency in using MIDI instruments to record sounds using a digital sampler.		
11.05	Demonstrate an understanding of MIDI and other control protocols in the recording studio.		
11.06	Configure MIDI and other show control devices in a studio or live environment.		
11.07	Troubleshoot MIDI and control communication problems.		
14.0	Demonstrate advanced digital production skills – the student will be able to:		SC.912.N.1.1
14.01	Demonstrate knowledge of and the ability to perform digital transfers of audio information between digital and analog production environments.		
14.02	Demonstrate a working familiarity with and understanding of the function and operation of multi-track digital audio workstations.		
14.03	Demonstrate an ability to edit, cut, erase, and insert sound utilizing various digital production techniques in the multi-track digital environment.		

**Florida Department of Education
Student Performance Standards**

Course Title: Digital Audio Production 6
Course Number: 8772360
Course Credit: 1

Course Description:

This course provides competencies in advanced digital production skills and music industry supplier transactions.

Abbreviations:

FS-M/LA = Florida Standards for Math/Language Arts
 NGSSS-Sci = Next Generation Sunshine State Standards for Science

Note: This course is pending alignment in the following categories: FS-M/LA.

CTE Standards and Benchmarks		FS-M/LA	NGSSS-Sci
14.0	Demonstrate advanced digital production skills – the student will be able to:		SC.912.N.1.1
14.04	Demonstrate the knowledge and ability to connect hardware for a digital audio workstation, an audio console, and various recording equipment together using proper signal flow techniques, cables and connectors.		
14.05	Demonstrate the knowledge and ability to record, edit and encode a surround-sound digital mix for use on DVD or SACD.		
14.06	Demonstrate the knowledge and ability to encode audio for use on the web, for digital distribution, or for use in video and animation.		
14.07	Demonstrate the knowledge and ability to create album cover art for CD and web distribution.		
14.08	Demonstrate the knowledge and ability to create a blog page to post Internet broadcasts.		
14.09	Demonstrate understanding of RSS feeds to be used to distribute digital content to Internet subscribers and to build an audience.		
14.10	Formulate a marketing strategy for Internet broadcast, independent CD release, or Internet distribution.		
15.0	Perform transactions with music industry suppliers – the student will be able to:		
15.01	Research sources for necessary equipment, supplies, and educational materials.		

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
15.02 Differentiate the levels of quality in the hierarchy of manufacturers, distributors and suppliers.		
15.03 Evaluate purchasing agreements including bids, warranties, and maintenance contracts.		
15.04 Evaluate the technical specifications of audio related products.		
15.05 Execute the purchase of audio equipment, supplies and educational materials.		

**Florida Department of Education
Student Performance Standards**

Course Title: Digital Audio Production 7
Course Number: 8772370
Course Credit: 1

Course Description:

This course provides competencies in planning, coordinating and managing an audio broadcast or album, as well as legal copyright issues.

Abbreviations:

FS-M/LA = Florida Standards for Math/Language Arts
 NGSSS-Sci = Next Generation Sunshine State Standards for Science

Note: This course is pending alignment in the following categories: FS-M/LA.

CTE Standards and Benchmarks	FS-M/LA	NGSSS-Sci
16.0 Plan, coordinate and manage an audio broadcast or album – the student will be able to:		SC.912.N.1.1
16.01 Define the program format and market demographics.		
16.02 Present a project proposal with script or lyrics.		
16.03 Develop a production schedule.		
16.04 Create a plan to acquire all required production resources and talent.		
16.05 Manage crew and staff during pre-production and production.		
16.06 Determine post-production requirements.		
16.07 Determine post-production activities.		
16.08 Conduct client approval reviews of the project.		
16.09 Archive and manage finished assets and originals.		
16.10 Oversee broadcast/Internet distribution or physical distribution to the market.		
16.11 Explain various techniques for program or segment promotion.		

CTE Standards and Benchmarks		FS-M/LA	NGSSS-Sci
17.0	Demonstrate knowledge of the legal issues related to copyright – the student will be able to:		SC.912.N.1.1
17.01	Define Federal Communications Commission (FCC) regulations pertaining to the broadcasting industry.		
17.02	Define the laws and regulations pertaining to the ownership and control of media assets, license allocation, measurement and records, political broadcasts and lottery laws.		
17.03	Define the laws and practices underlying rights, releases and permits.		
17.04	Define the laws and practices underlying slander, libel, free speech and “truth in advertising” issues.		
17.05	Define the laws and practices underlying indecent programming, obscenity and censorship issues.		
17.06	Define the laws and practices underlying contract, labor, copyright and insurance/liability issues.		
18.0	Demonstrate knowledge of current and future digital audio networking standards – the student will be able to:		
18.01	Demonstrate the ability to plan and configure a basic digital audio network; include Audio over Ethernet (AoE).		
18.02	Demonstrate knowledge of digital audio networking options (e.g., Audinate’s DANTE).		
18.03	Demonstrate knowledge of networking and processing platforms for real-time professional audio applications (e.g., SoundGrid by Waves Audio).		
18.04	Demonstrate knowledge of Multichannel Audio Digital Interface (MADI).		
18.05	Demonstrate knowledge of AES50.		
19.0	Demonstrate professionalism and employability skills – the student will be able to:		
19.01	Demonstrate punctuality and promptness.		
19.02	Demonstrate a strong work ethic and exemplify passion and motivation.		
19.03	Demonstrate flexibility and teamwork when working in groups.		
19.04	Demonstrate the ability to interact with staff, vendors, and performers in a professional manner.		
19.05	Demonstrate knowledge of business processes and 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

The occupational standards and benchmarks outlined in this secondary program correlate to the standards and benchmarks of the postsecondary program with the same Classification of Instructional Programs (CIP) number.

MyCareerShines is an interactive resource to assist students in identifying their ideal career and to enhance preparation for employment. Teachers are encouraged to integrate this resource into the program curriculum to meet the employability goals for each student.

Career and Technical Student Organization (CTSO)

SkillsUSA is the intercurricular career and technical student organization(s) 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.

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 Occupational Completion Point (OCP) or a Modified Occupational Completion Point (MOCP). 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 an OCP/MOCP. The student should work on different competencies and new applications of competencies each year toward completion of the OCP/MOCP. 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: Kitchen and Bath Specialization
Career Cluster: Arts, A/V Technology and Communication

CCC	
CIP Number	0450040805
Program Type	College Credit Certificate (CCC)
Program Length	39 credit hours
CTSO	Collegiate DECA
SOC Codes (all applicable)	27-1029 – Designers, All Other

Purpose

The purpose of this program is to prepare students for initial employment as a kitchen designer, bath designer, kitchen sales person, bath sales person, drafting/design technician, customer service specialist, job estimator, expeditor, industry representative, CAD technician, or installer/project manager.

This certificate program is part of the Interior Design Technology AS degree program (1450040801).

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 Arts, A/V Technology and Communication 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 Arts, A/V Technology and Communication career cluster.

Completion of studies is the first step in the process of fulfilling requirements needed to sit for the Kitchen and Bath certification. A secondary purpose of the program is to provide supplemental or required training for persons previously or currently employed in the above listed occupations.

The curriculum of the program includes the following: the elements and principles of design; the study of the human environment; programming; the design process and evaluation of design; technical knowledge and skills; selection and specifying of materials, fixtures, and equipment; visual and oral communication; design history; business principles and practices; lighting; space planning; codes; universal design; and employability. Students are required to create and maintain a portfolio throughout this program.

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

Standards:

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

- 01.0 Identify and apply elements and principles of design to interior spaces.
- 02.0 Describe the interrelationship between humans and their interior environments.
- 03.0 Plan for space utilization and development according to identified functions (programming and diagramming).
- 04.0 Select and arrange furniture, fixtures, fabrics, equipment, and accessories.
- 05.0 Identify the appropriate uses and functions of materials.
- 06.0 Identify, research, and specify interior design materials and resources.
- 07.0 Research and specify appropriate interior lighting options.
- 08.0 Identify interior methods and systems in building construction.
- 09.0 Identify interior building codes, regulations, and legislation pertaining to residential and non-residential spaces.
- 10.0 Communicate design projects through graphic techniques and visual/oral presentation skills.
- 11.0 Demonstrate employability skills and identify job and career opportunities.
- 12.0 Identify professional business organization and development procedures and/or systems.
- 13.0 Recognize, identify, and/or analyze historical, cultural, and societal influences on structures, interiors, and furnishings.
- 14.0 Analyze and apply the concepts of adaptive reuse, renovation, restoration, and/or the historic preservation of existing structures.
- 15.0 Incorporate evaluation, space planning, layout, workflow, and design into a project.
- 16.0 Identify the categories (high, medium, low) involved in the calculation of a budget estimate for an interior design project.
- 17.0 Learn the process of manually and/or electronically preparing a complete set of working construction drawings for a building.
- 18.0 Identify the importance of acoustics to habitable spaces.
- 19.0 Create a Life Safety Plan.
- 20.0 Design safe and universally accessible spaces.
- 21.0 Identify the elements of a basic agreement between the designer and the client; identify services and responsibilities.
- 22.0 Demonstrate knowledge of computer skills.
- 23.0 Identify, research, and design sustainable interiors.
- 24.0 Participate in an internship.

Florida Department of Education
Student Performance Standards

Program Title: Kitchen and Bath Specialization
 CIP Number: 0450040805
 Program Length: 39 credit hours
 SOC Code(s): 27-1029

This certificate program is part of the Interior Design Technology AS degree program (1450040801). At the completion of this program, the student will be able to:

01.0	Identify and apply elements and principles of design to interior spaces – the student will be able to:
01.01	Evaluate aspects of color schemes in relation to interior design.
01.02	Describe the color wheel.
01.03	Explain the psychological effects of color on space and human interaction.
01.04	Demonstrate the primary elements of design (point, line, plane, volume) and the role of these elements in interior design and architecture.
01.05	Describe and demonstrate the function of the visible spectrum and pigmentation as inherent properties of design materials and their impact on color perception.
01.06	Describe and demonstrate knowledge of the three dimensions of color.
01.07	Identify common comprehensive color systems used by designers for the description and specification of color.
01.08	Apply knowledge of the results and effects of color interaction in design.
01.09	Identify and apply the categories of material and surface texture to interior needs and functions; determine how they affect the perception of color in interiors spaces.
01.10	Identify and demonstrate the role of light on perception of surface texture in design projects and how light affects the perception of color in interior spaces.
01.11	Identify, describe, and apply the principles of design and design elements to the function (use of the interior space) and aesthetics of design.
02.0	Describe the interrelationship between humans and their interior environments – the student will be able to:
02.01	Identify personal and group needs that influence the use of each occupied space, including those of persons with special needs.
02.02	Identify, describe, and apply the principles of evidence-based design.

02.03	Demonstrate an understanding of the Americans with Disabilities Act and how it affects the interior environment.
02.04	Demonstrate an understanding of specialized design needs.
02.05	Illustrate the principles of ergonomics and anthropometrics.
02.06	Identify responses to the psychological, physical, and social needs of people using interior spaces (e.g., territoriality, personalization, group interaction).
03.0	Plan for space utilization and development according to identified functions (programming and diagramming) – the student will be able to:
03.01	Identify, describe, and demonstrate the established functional and aesthetic goals and objectives that direct the programming process.
03.02	Demonstrate an understanding of diverse client needs.
03.03	Identify, define, and apply known methods of collecting information.
03.04	Create and interpret a design matrix and other schematic processes.
03.05	Define and/or illustrate bubble diagrams and block planning.
03.06	Describe spatial adjacency, utilization, circulation, light, and function.
03.07	Identify and apply the required adjacency and spatial considerations in interior spaces.
03.08	Identify and apply the requirements of good traffic circulation.
03.09	Verify appropriate allocations of space according to programmatic needs.
03.10	Sketch preliminary layouts.
03.11	Identify the differences between the form and usage of public and private spaces.
04.0	Select and arrange furniture, fixtures, fabrics, equipment, and accessories – the student will be able to:
04.01	Analyze the criteria for the selection and arrangement of furnishings for the client.
04.02	Develop a furniture arrangement and traffic plan.
04.03	Select bathroom and kitchen fixtures.
04.04	Select kitchen and bath cabinets for an interior design plan.
04.05	Identify and compare the different fabrics available and recognize characteristics such as durability, texture, comfort, and end use.
04.06	Identify precedents in the use of furnishings.

05.0	Identify the appropriate uses and functions of materials – the student will be able to:
05.01	Identify and analyze flooring materials and determine the advantages and disadvantages of each type.
05.02	Analyze the characteristics of fibers and the construction of various types of floor coverings and interior fabrics.
05.03	Identify various ceiling treatments.
05.04	Identify and categorize types of wall coverings.
05.05	Identify and describe the types and functions of windows.
05.06	Identify and describe the different types of window coverings.
05.07	Demonstrate the ability to calculate the quantity needed for flooring, window treatments, and wall coverings.
05.08	Consider maintenance and/or recycling requirements when specifying materials.
06.0	Identify, research, and specify interior design materials and resources – the student will be able to:
06.01	Identify manufacturers of lighting, architectural treatments, and accessories.
06.02	Identify resources for recyclable materials.
06.03	Demonstrate an understanding of the differences in quality of design materials.
06.04	Identify and describe aspects of interior materials and installation methods that have the potential to impact the health, safety, and welfare of residential and/or commercial clientele.
06.05	Identify and describe the roles manufacturers' representatives, contractors, and other resource specialists play in assisting the designer and client in the appropriate selection, design, specification, and installation of materials and finishes for design projects.
06.06	Identify and describe the roles testing standards, agencies, and ratings have on the designer's selection and the specification of materials and products to protect the health, safety, and welfare of the client and the public.
07.0	Research and specify appropriate interior lighting – the student will be able to:
07.01	Identify lighting requirements.
07.02	Relate lighting options and the selection of lighting fixtures to interior design.
07.03	Identify appropriate lighting fixtures for efficient and effective performance in residential and/or commercial interior design projects.
07.04	Identify and describe human responses to light contrast.
07.05	Identify and describe the effects of contrast and diffusion on interior spaces.
07.06	Describe the impact (positive and negative) of daylight on interiors.

07.07	Describe the various means of controlling daylight impact on interiors.
07.08	Identify and describe lighting needs for clients with special needs.
07.09	Identify and define the characteristics and sources of man-made light.
07.10	Identify and describe the color characteristics of artificial lighting.
07.11	Identify and apply sustainable/green design concerns and other economic issues related to lighting design (e.g., initial costs, maintenance, replacement).
07.12	Identify, describe, and apply knowledge of both architectural and portable lighting.
07.13	Apply knowledge of appropriate fixture placement and location to interior design projects.
07.14	Identify, describe, and apply the appropriate placement and selection of light switches.
07.15	Identify and describe the codes and regulations that impact lighting design as related to health, safety and welfare requirements.
08.0	Identify interior methods and systems in building construction – the student will be able to:
08.01	Identify methods and techniques of construction.
08.02	Read basic plans.
08.03	Describe the advantages of applying green design considerations to construction decisions.
08.04	Identify the different materials and assemblies employed in the construction of partitions, walls, and ceilings for residential and commercial application.
08.05	Identify the types of millwork, woods, veneers and finishes available.
08.06	Identify and describe the appropriate cuts of lumber and timber for construction or millwork application.
08.07	Identify the appropriate installation systems for wall paneling and acoustical ceilings.
09.0	Identify interior building codes, regulations, and legislation pertaining to residential and non-residential spaces – the student will be able to:
09.01	Identify residential and non-residential local, state, and national building codes.
09.02	Identify legislation regarding barrier-free environment.
09.03	Identify regulations concerning health and safety codes.
09.04	Cite labeling techniques identifying products that meet flammability standards required by fire code.
09.05	Identify the different requirements based on type of occupancy and type of construction.

09.06	Describe the material ratings and resistance of materials to fire.
09.07	Identify ADA requirements relative to the design of interior spaces.
09.08	Identify residential building codes.
10.0	Communicate design concepts through visual and oral presentation skills – the student will be able to:
10.01	Use sketching techniques, drafting equipment, and/or computer programs to communicate interior design projects.
10.02	Demonstrate the use and care of equipment.
10.03	Demonstrate neatness and accuracy.
10.04	Execute line work by hand and/or by CAD.
10.05	Illustrate graphic notations and scale in a hand-drawing or CAD drawing.
10.06	Demonstrate overlapping techniques.
10.07	Explain detail drawings.
10.08	Illustrate shade and shadow from natural light sources by hand-drawing and/or CAD drawing.
10.09	Apply methods and techniques for two-dimensional and three-dimensional illustrations.
10.10	Apply the methods and techniques of one-point perspective drawing and two-point perspective drawing.
10.11	Create, analyze, and evaluate oral and graphic techniques for oral and visual presentations.
10.12	Demonstrate layout techniques for presentations by applying the principles of design.
10.13	Use lettering techniques and font selection for presentations.
10.14	Use graphic design and presentation skills to compile and review a portfolio (printed and/or digital).
11.0	Demonstrate employability skills and identify job and career opportunities – the student will be able to:
11.01	Conduct a job search.
11.02	Secure information concerning a job.
11.03	Identify documents that may be required to apply for a job.
11.04	Demonstrate job interview techniques.

11.05	Identify or demonstrate appropriate responses to criticism from an employer, supervisor, coworker, or customer.
11.06	Identify and/or demonstrate acceptable work habits.
11.07	Demonstrate acceptable employee health habits.
11.08	Demonstrate customer relations skills.
11.09	Evaluate sources of employment information.
11.10	Identify post-A.S. degree options (e.g., 4-year degrees, licensing/NCIDQ, certifications, LEED, CAPS).
11.11	Identify job and career opportunities in the interior design industry.
12.0	Identify professional business organization and development procedures and/or systems – the student will be able to:
12.01	Identify interior design industry-related professional organizations.
12.02	Analyze the business practices and procedures necessary for the operation of an interior design business.
12.03	Recognize the legal and business terms used in the field of interior design.
12.04	Describe the legal considerations and forms necessary to the practice of interior design.
12.05	Describe the procedures used in current interior design work experience.
12.06	Identify considerations for selecting the location of a business.
12.07	Describe the organizational structure of an interior design firm.
12.08	Identify the principles of record keeping (e.g., proposals, invoices, billable hours, markups).
12.09	Identify types of contracts utilized by an interior design firm.
12.10	Cite the licensing requirements needed to operate a business.
12.11	Identify the methods or techniques of supply procurement.
12.12	Demonstrate an understanding of the code of ethics for professional designers as prepared by industry-related professional organizations.
12.13	Demonstrate an understanding of licensing requirements.
12.14	Demonstrate an understanding of the uses of social media as a marketing tool for the interior design field.
13.0	Recognize, identify, and/or analyze historical, cultural, and societal influences on structures, interiors, and furnishings – the student will be able to:

13.01	Identify and analyze the characteristics of historic design in relation to the history of interiors.
13.02	Identify, recognize, compare, and describe different movements and historical periods in the evolution of architecture and interior design (e.g., Roman and Greek influences, styles of Middle Ages, the effects of the Italian Renaissance and the French Renaissance, Spanish and Islamic influences, English/British influences).
13.03	Analyze the work of contemporary architects, interior designers, and furniture designers.
13.04	Apply knowledge and appropriate synthesis of design forms with furnishings, finishes, and materials in interior design projects.
13.05	Describe how architecture, furniture, and decorative arts relate to interior design throughout history.
14.0	Analyze and apply the concepts of adaptive reuse, renovation, restoration, and/or the historic preservation of existing structures – the student will be able to:
14.01	Describe the significant issues and fundamentals of adaptive reuse, renovation, restoration, and historic preservation.
14.02	Compare adaptive reuse, renovation, restoration, and historic preservation options.
14.03	Identify sources for researching historical period data.
15.0	Incorporate evaluation, space planning, layout, workflow, and design into a project – the student will be able to:
15.01	Develop a plan for the implementation of design concepts into a design project.
15.02	Apply design methods and techniques to a project in residential interior design.
15.03	Apply design methods and techniques to a project in nonresidential interior design.
15.04	Understand and apply programming sequences in a design product.
15.05	Demonstrate an understanding of design development stages by completing a design project.
15.06	Identify the purpose and content of a post-occupancy evaluation.
15.07	Define a schedule for installations.
15.08	Research catalog price lists and understand the importance of preparing order forms.
15.09	Prepare furniture, fixtures, and equipment specifications for a project.
15.10	Describe finish schedules/plans.
16.0	Identify the categories (high, medium, low) involved in the calculation of a budget estimate for an interior design project – the student will be able to:
16.01	Describe the categories of materials, furnishings, equipment, overhead, and services to be provided.

16.02	Identify different methods available to estimate the cost of a project.
16.03	Develop and prepare a budget for a project.
17.0	Learn the process of manually and/or electronically preparing a complete set of working construction drawings for a building – the student will be able to:
17.01	Organize a construction package according to content categories.
17.02	Coordinate documents from different parties involved in the process of compiling construction drawings.
17.03	Utilize standard graphics and symbols.
17.04	Specify millwork and special features.
18.0	Identify the importance of acoustics on habitable spaces – the student will be able to:
18.01	Identify, describe, and/or apply the basic principles, concepts, and qualities of sound as they affect human perception.
18.02	Demonstrate an understanding of sound transmission and levels.
18.03	Identify and/or apply the fundamentals of sound absorption to evaluate the means that might be employed to control the acoustic quality of a space.
18.04	Demonstrate an understanding of and/or apply the knowledge of spatial organization and surface treatments for walls, ceilings, and finishes to achieve desired results in sound balance and comfort in an interior.
19.0	Create a Life Safety Plan – the student will be able to:
19.01	Calculate the occupancy load of a space and the required number of exits.
19.02	Describe the appropriate exit sizes, travel distances, and location of exits within a room or corridor.
19.03	Choose appropriate door types for access and egress.
19.04	Locate stairways to meet fire-safety requirements.
19.05	Identify the differences between residential and commercial access and egress requirements.
20.0	Design safe and universally accessible spaces – the student will be able to:
20.01	Identify the use of ramps and automated systems designed to accommodate persons with disabilities.
20.02	Demonstrate an understanding of the anthropometrics and ergonomics of a disabled person to aid in the selection of fixtures, floor surfaces, and bathroom layouts.
20.03	Implement the principles of Uniform Standards for Universal Design.
20.04	Describe and implement Aging in Place methodology.

21.0	Identify the elements of a basic agreement between the designer and the client; identify services and responsibilities – the student will be able to:
21.01	Describe the scope of basic interior design services.
21.02	Outline the mutual responsibilities of the owner and the designer.
22.0	Demonstrate knowledge of computer skills – the student will be able to:
22.01	Demonstrate knowledge of CAD and/or other comparable programs utilized in the industry.
22.02	Demonstrate knowledge of 2D and 3D computer drawing and graphics software.
22.03	Identify and research interior design sources on the Internet.
22.04	Demonstrate proficiency in printing and/or drawing to scale.
22.05	Input, manipulate, and export computer images using a variety of software programs and/or Internet resources.
22.06	Demonstrate design solutions and support information using various software programs.
23.0	Identify, research, and design sustainable interiors – the student will be able to:
23.01	Recognize, define, and understand the concepts and terminology of green/sustainable design and energy and water conservation.
23.02	Describe the differences between sustainable and green design.
23.03	Describe and apply the practice of Environmentally Responsible Interior Design (ERID).
23.04	Demonstrate the ability to identify, research, and use sustainable materials in interior design.
23.05	Identify the governing organizations associated with sustainable design.
23.06	Evaluate the cost of green/sustainable design; consider initial and long-term costs.
23.07	Recognize the concepts associated with sustainable design.
23.08	Define the terminology associated with sustainable design.
23.09	Identify appropriate sustainable design resources.
23.10	Identify the costs and requirements of sustainable design.
23.11	Identify the principles of sustainable lighting, acoustics, thermal comfort, and indoor air quality to enhance the health, safety, welfare, and performance of occupants.
23.12	Demonstrate an understanding of the concepts, principles, and theories of sustainability as they pertain to building methods, materials, systems, and occupants.

23.13 Identify sustainable interior construction and building systems.

23.14 Demonstrate an understanding of daylight, energy efficient luminaries, and alternative energy sources.

24.0 Participate in an internship – the student will be able to:

24.02 Establish achievable goals related to an internship.

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)

Collegiate DECA - Delta Epsilon Chi is the intercurricular career and technical student organization(s) 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.

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: Home Staging Specialist
Career Cluster: Arts, A/V Technology and Communication

CCC	
CIP Number	0450040807
Program Type	College Credit Certificate (CCC)
Program Length	12 credit hours
CTSO	Collegiate DECA
SOC Codes (all applicable)	27-1029 – Designers, All Other

Purpose

The purpose of this program is to prepare students to work as home staging specialists.

This certificate program is part of the Interior Design Technology AS degree program (1450040801).

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 Arts, A/V Technology and Communication 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 Arts, A/V Technology and Communication career cluster.

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

Standards

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

- 01.0 Identify and apply elements and principles of design to interior spaces.
- 02.0 Select and arrange furniture, fixtures, fabrics, equipment, and accessories.
- 03.0 Identify, research, and specify interior design materials and resources.
- 04.0 Communicate design projects through graphic techniques and visual/oral presentation skills.
- 05.0 Demonstrate employability skills and identify job and career opportunities.
- 06.0 Analyze and apply the concepts of adaptive reuse, renovation, restoration, and/or the historic preservation of existing structures.
- 07.0 Identify the elements of a basic agreement between the designer and the client; identify services and responsibilities.
- 08.0 Demonstrate knowledge of computer skills.
- 09.0 Identify, research, and design sustainable interiors.

Florida Department of Education
Student Performance Standards

Program Title: Home Staging Specialist
 CIP Number: 0450040807
 Program Length: 12 credit hours
 SOC Code(s): 27-1029

This certificate program is part of the Interior Design Technology AS degree program (1450040801). At the completion of this program, the student will be able to:

01.0	Identify and apply elements and principles of design to interior spaces – the student will be able to:
01.01	Evaluate aspects of color schemes in relation to interior design.
01.02	Describe the color wheel.
01.03	Explain the psychological effects of color on space and human interaction.
01.04	Demonstrate the primary elements of design (point, line, plane, volume) and the role of these elements in interior design and architecture.
01.05	Describe and demonstrate the function of the visible spectrum and pigmentation as inherent properties of design materials and their impact on color perception.
01.06	Describe and demonstrate knowledge of the three dimensions of color.
01.07	Identify common comprehensive color systems used by designers for the description and specification of color.
01.08	Apply knowledge of the results and effects of color interaction in design.
01.09	Identify and apply the categories of material and surface texture to interior needs and functions; determine how they affect the perception of color in interiors spaces.
01.10	Identify and demonstrate the role of light on perception of surface texture in design projects and how light affects the perception of color in interior spaces.
01.11	Identify, describe, and apply the principles of design and design elements to the function (use of the interior space) and aesthetics of design.
02.0	Select and arrange furniture, fixtures, fabrics, equipment, and accessories – the student will be able to:
02.01	Analyze the criteria for the selection and arrangement of furnishings for the client.
02.02	Develop a furniture arrangement and traffic plan.

02.03	Select bathroom and kitchen fixtures.
02.04	Select kitchen and bath cabinets for an interior design plan.
03.0	Identify the appropriate uses and functions of materials – the student will be able to:
03.01	Identify and analyze flooring materials and determine the advantages and disadvantages of each type.
03.02	Analyze the characteristics of fibers and the construction of various types of floor coverings and interior fabrics.
03.03	Identify various ceiling treatments.
03.04	Identify and categorize types of wall coverings.
03.05	Identify and describe the types and functions of windows.
03.06	Identify and describe the different types of window coverings.
03.07	Demonstrate the ability to calculate the quantity needed for flooring, window treatments, and wall coverings.
03.08	Consider maintenance and/or recycling requirements when specifying materials.
04.0	Communicate design concepts through visual and oral presentation skills – the student will be able to:
04.01	Demonstrate neatness and accuracy.
04.02	Execute line work by hand and/or by CAD.
04.03	Illustrate graphic notations and scale in a hand-drawing or CAD drawing.
04.04	Demonstrate overlapping techniques.
04.05	Illustrate shade and shadow from natural light sources by hand-drawing and/or CAD drawing.
05.0	Demonstrate employability skills and identify job and career opportunities – the student will be able to:
05.01	Conduct a job search.
05.02	Secure information concerning a job.
05.03	Identify documents that may be required to apply for a job.
05.04	Demonstrate job interview techniques.
05.05	Identify or demonstrate appropriate responses to criticism from an employer, supervisor, coworker, or customer.

05.06	Identify and/or demonstrate acceptable work habits.
05.07	Demonstrate acceptable employee health habits.
05.08	Demonstrate customer relations skills.
05.09	Evaluate sources of employment information.
05.10	Identify post-A.S. degree options (e.g., 4-year degrees, licensing/NCIDQ, certifications, LEED, CAPS).
05.11	Identify job and career opportunities in the interior design industry.
06.0	Analyze and apply the concepts of adaptive reuse, renovation, restoration, and/or the historic preservation of existing structures – the student will be able to:
06.01	Describe the significant issues and fundamentals of adaptive reuse, renovation, restoration, and historic preservation.
06.02	Compare adaptive reuse, renovation, restoration, and historic preservation options.
06.03	Identify sources for researching historical period data.
07.0	Identify the elements of a basic agreement between the designer and the client; identify services and responsibilities – the student will be able to:
07.01	Describe the scope of basic interior design services.
07.02	Outline the mutual responsibilities of the owner and the designer.
08.0	Demonstrate knowledge of computer skills – the student will be able to:
08.01	Identify and research interior design sources on the Internet.
08.02	Input, manipulate, and export computer images using a variety of software programs and/or Internet resources.
09.0	Identify, research, and design sustainable interiors – the student will be able to:
09.01	Recognize, define, and understand the concepts and terminology of green/sustainable design and energy and water conservation.
09.02	Describe the differences between sustainable and green design.
09.03	Describe and apply the practice of Environmentally Responsible Interior Design (ERID).
09.04	Demonstrate the ability to identify, research, and use sustainable materials in interior design.
09.05	Identify the governing organizations associated with sustainable design.

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)

Collegiate DECA - Delta Epsilon Chi is the intercurricular career and technical student organization(s) 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.

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: **Television System Support**
Career Cluster: **Arts, A/V Technology and Communication**

CCC	
CIP Number	0609040205
Program Type	College Credit Certificate (CCC)
Program Length	24 credit hours
CTSO	SkillsUSA
SOC Codes (all applicable)	27-4099 – Media and Communication Equipment Workers, All Other

Purpose

This program is designed to prepare students for employment as a master control operator, senior cable installer, field service specialist, or to provide supplemental training to persons previously or currently employed in these occupations. This specialization content includes, but is not limited to, basic electronics skills, transmitters and receivers, transmission and distribution systems, cabling, and analog and digital video systems.

This certificate program is part of the Telecommunication Engineering Technology AS degree program (1615030302).

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 Arts, A/V Technology and Communication 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 Arts, A/V Technology and Communication career cluster.

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

Standards

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

- 01.0 Demonstrate knowledge of basic electronics.
- 02.0 Demonstrate proficiency in basic operation and application of transmitters, receivers, and transmission and distribution systems.
- 03.0 Demonstrate proficiency in the analysis of transmission and distribution systems.
- 04.0 Demonstrate proficiency in network communications.
- 05.0 Demonstrate proficiency in the analysis of telephony cabling equipment.
- 06.0 Demonstrate proficiency in the analysis of analog and digital video systems.

Florida Department of Education
Student Performance Standards

Program Title: **Television System Support**
 CIP Number: **0609040205**
 Program Length: **24 credit hours**
 SOC Code(s): **27-4099**

This certificate program is part of the Telecommunication Engineering Technology AS degree program (1615030302). At the completion of this program, the student will be able to:

01.0 Demonstrate knowledge of basic electronics – the student will be able to:

01.01 Perform various types of soldering.

01.02 Perform various types of wiring and cable terminations.

01.03 Demonstrate knowledge of AC/DC concepts and applications.

01.04 Demonstrate knowledge of computer systems and basic applications.

01.05 Demonstrate use of basic test and measurement equipment.

01.06 Understand and demonstrate safety rules.

01.07 Demonstrate understanding of digital fundamentals.

02.0 Demonstrate proficiency in basic operation and application of transmitters, receivers, and transmission and distribution systems – the student will be able to:

02.15 Calculate transmission line characteristics and understand impedance matching.

02.17 Test, set up and adjust antenna systems using a power meter, network analyzer, and SWR meter.

02.18 Describe government rules, regulations, and permits.

03.0 Demonstrate proficiency in the analysis of transmission and distribution systems – the student will be able to:

03.01 Analyze and demonstrate the operation of optical devices.

03.02 Splice and terminate cabling systems.

03.03 Analyze and demonstrate multiplex transmission including use of full and half duplex communications.

03.04	Describe gain and loss concepts as applied to transmission and distribution systems.
03.05	Operate satellite communication systems.
04.0	Demonstrate proficiency in network communications – the student will be able to:
04.01	Fabricate and test LAN cabling.
05.0	Demonstrate proficiency in the analysis of telephony cabling equipment – the student will be able to:
05.01	Describe the general characteristics of a telephone subscriber loop.
05.02	Terminate and test telephony cable.
06.0	Demonstrate proficiency in the analysis of analog and digital video systems – the student will be able to:
06.01	Describe the fundamental principles and concepts of television/video systems.
06.02	Describe the operation of the key components of a television/video system.
06.03	Analyze and describe the operation of the various sections of a DTV transmitter.
06.04	Analyze and describe the characteristics of the television signal (analog, digital, RF).
06.05	Assemble and test cables and connectors related to video/audio 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.

Career and Technical Student Organization (CTSO)

SkillsUSA is the intercurricular career and technical student organization(s) 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.

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: Video Editing and Post Production
Career Cluster: Arts A/V Technology and Communication

CCC	
CIP Number	0609040217
Program Type	College Credit Certificate (CCC)
Program Length	24 credit hours
CTSO	SkillsUSA
SOC Codes (all applicable)	27-4032 – Film and Video Editors

Purpose

The purpose of this program is to prepare students for employment as video production technicians or to provide supplemental training for persons previously or currently employed in these occupations. The content includes, but is not limited to television, broadcast, video, design and Internet media training. This program focuses on broad transferable skills and stresses understanding and demonstration of the following elements of the television video and Internet/webcast industries: working as part of a team, safe and efficient work practices, use of editing equipment, use of lighting equipment, operation of video camera, set up and operation of audio recording equipment, design and generation of graphic elements and organization and editing of video resources.

This certificate program is part of the Digital Television and Media Production (60) AS degree program (1609070213).

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 Arts, A/V Technology and Communication 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 Arts, A/V Technology and Communication career cluster.

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

Standards

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

- 01.0 Demonstrate the ability to collaborate with others.
- 02.0 Demonstrate safe and efficient work practices.
- 03.0 Generate a production schedule.
- 04.0 Plan a production set.
- 05.0 Create appropriate lighting for location and/or set productions.
- 06.0 Operate studio and field video cameras
- 07.0 Record, mix and edit audio resources.
- 08.0 Organize and edit video resources.
- 09.0 Design and generate graphic elements.

Florida Department of Education
Student Performance Standards

Program Title: Video Editing and Post-Production
 CIP Number: 0609040217
 Program Length: 24 Credit Hours
 SOC Code(s): 27-4032

This certificate program is part of the Digital Television and Media Production (60) AS degree program (1609070213). At the completion of this program, the student will be able to:

01.0 Demonstrate the ability to collaborate with others – the student will be able to:

01.01 Demonstrate the ability to work as part of a team.

02.0 Demonstrate safe and efficient work practices – the student will be able to:

02.01 Follow industry safety rules, regulations and policies.

02.02 Demonstrate proper handling of hazardous materials.

02.03 Demonstrate awareness of appropriate ergonomics.

02.04 Demonstrate the proper care and use of equipment.

03.0 Generate a production schedule – the student will be able to:

03.01 Define the segment or program type.

04.0 Plan a production set – the student will be able to:

04.01 Define the set requirements for a specific program type.

05.0 Create appropriate lighting for location and/or set productions – the student will be able to:

05.01 Determine appropriate lighting needs for production settings.

05.02 Identify locations and studio lighting types, methods of use and application.

05.03 Use lighting equipment according to industry safety standards.

05.04 Define light quality in terms of intensity, color, direction and characteristics.

05.05	Light a location set with ambient/available and supplemental lighting.
06.0	Operate studio and field video cameras – the student will be able to:
06.01	Use current industry standard video production equipment.
06.02	Operate a camera in studio and location (field) production environments.
06.03	Plan a shot to obtain the required action/footage.
06.04	Demonstrate appropriate shot sequences, transitions and post-production (editing) effects.
06.05	Control camera movement to obtain the required effects.
06.06	Control lens, focal length, aperture and exposure to obtain required effects.
06.07	Set up the camera and recording equipment sequence.
06.08	Perform appropriate pre-production checks of equipment function.
06.09	Perform basic routine, preventative and repair maintenance on video equipment.
06.10	Define the various recording formats and media.
07.0	Record, mix and edit audio resources – the student will be able to:
07.01	Identify and select microphones for production needs.
07.02	Determine optimal microphone placement.
07.03	Set up audio recording equipment.
07.04	Establish appropriate recording conditions.
07.05	Perform appropriate pre-production checks of production equipment.
07.06	Perform sound edits and enhancements.
07.07	Record location sound.
08.0	Organize and edit video resources – the student will be able to:
08.01	Log and organize video resources.
08.02	Operate editing hardware and software.

08.03	Digitize video resources into post-production equipment and workflow.
08.04	Edit video, graphic elements, and audio.
08.05	Maintain continuity and production values.
08.06	Apply color correction to video footage.
09.0	Design and generate graphic elements – the student will be able to:
09.01	Determine the graphic requirements for a production.
09.02	Operate graphic production software.
09.03	Produce broadcast graphic elements for titling, credits and graphic transitions.
09.04	Set up and operate character generator equipment and software.
09.05	Generate appropriate special effects for a production.
09.06	Demonstrate an understanding of graphic image types and files.
09.07	Use image-editing software.
09.08	Demonstrate an ability to use type, color, composition and graphic elements for a specific production effect.

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)

SkillsUSA is the intercurricular career and technical student organization(s) 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.

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: Communication Leadership
Career Cluster: Arts A/V Technology and Communication

CCC	
CIP Number	0609049902
Program Type	College Credit Certificate (CCC)
Program Length	18 credits hours
CTSO	SkillsUSA
SOC Codes (all applicable)	27-3099

Purpose

This certificate program is part of the New Media Communication AS degree program (1609049901).

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 Arts, A/V Technology and Communication 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 Arts, A/V Technology and Communication career cluster.

The content of this program is designed to prepare students for initial employment in the field of new media communication or to provide supplemental training for those already employed in the field. This certificate provides students with the skills needed to create effective new media content.

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

Standards

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

- 01.0 Demonstrate effective professional, interpersonal, and intercultural communication skills.
- 02.0 Demonstrate the fundamental skills of the writing process for varied mass and new media communication platforms.
- 03.0 Demonstrate appropriate technical, analytical, and evaluative skills for new media content creation, delivery, and social impact.

Florida Department of Education
Student Performance Standards

Program Title: Communication Leadership
CIP Number: 0609049902
Program Length: 18 credit hours
SOC Code(s): 27-3099

This certificate program is part of the New Media Communication AS degree program (1609049901). At the completion of this program, the student will be able to:

01.0	Demonstrate effective professional, interpersonal, and intercultural communication skills – the student will be able to:
01.01	Demonstrate an understanding of varied communication theories.
01.02	Demonstrate effective oral communication and presentation skills.
01.03	Demonstrate the skills required to interactively and critically participate in new media environments and platforms.
01.04	Prepare and verbally deliver factual material in a direct and logical manner.
01.05	Demonstrate scholarly research skills.
01.06	Demonstrate the effective use of visual aids, technical equipment, and projected images appropriate for new media.
01.07	Demonstrate professional interviewing skills and general interpersonal communications.
01.08	Produce a body of work that demonstrates proficiency in language, spelling, mechanics, and grammar.
01.09	Increase listening skills and the retention of information.
01.10	Demonstrate understanding of effective methods of organizational change and leadership.
02.0	Demonstrate the fundamental skills of the writing process for varied mass and new media communication platforms – the student will be able to:
02.01	Understand the nature of good writing and explain how writing for mass and/or new media communication differs from other formal writing forms.
02.02	Demonstrate mastery of English grammar, syntax, and punctuation.
02.03	Detail the elements of style that characterize the AP stylebook.
02.04	Compose written media using established web-based technologies and software applications.

02.05	Demonstrate understanding of visual media/images and the impact of these images on composition.
02.06	Utilize spreadsheet software to organize and analyze data, perform calculations, and draft executive summaries for publication.
02.07	Prepare well-written professional communications/articles and reports using publishing applications and software for new media.
03.0	Demonstrate appropriate technical, analytical, and evaluative skills for new media content creation, delivery, and social impact – the student will be able to:
03.01	Demonstrate understanding of media content at a literal level (e.g., capture others' ideas published on varied media platforms).
03.02	Demonstrate the ability to utilize new media, digital publishing, and digital imaging software.
03.03	Demonstrate the ability to interpret and construct dynamic models (simulation) and navigate information across various modalities.
03.04	Demonstrate understanding of the construction of media as a subjective and social process.
03.05	Demonstrate understanding of co-creation and sharing relative to new media content creation.

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)

SkillsUSA is the intercurricular career and technical student organization(s) 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. The activities of such organizations are defined as part of the curriculum in accordance with Rule 6A-6.065, F.A.C.

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: Digital Media/Multimedia Authoring
Career Cluster: Arts A/V Technology and Communication

CCC	
CIP Number	0609070209
Program Type	College Credit Certificate (CCC)
Program Length	12 credits hours
CTSO	SkillsUSA
SOC Codes (all applicable)	27-4099 – Media and Communication Equipment Workers, All Other

Purpose

This program is designed to prepare students for initial employment as Digital Media/Multimedia Production Technicians or Digital Media/Multimedia Developers, or to provide supplemental training for those already employed in the field. This certificate provides students with the computer, production, and digital media skills needed to create digital media/multimedia projects.

This certificate program is part of the Digital Media/Multimedia Technology (60) AS degree program (1611080103).

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 Arts, A/V Technology and Communication 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 Arts, A/V Technology and Communication career cluster.

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

Standards

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

- 01.0 Create, alter and/or adjust presentations using a variety of digital media/multimedia technologies.
- 02.0 Use computer applications for digital media/multimedia projects.
- 03.0 Produce digital media/multimedia projects.

Florida Department of Education
Student Performance Standards

Program Title: Digital Media/Multimedia Authoring
CIP Number: 0609070209
Program Length: 12 credit hours
SOC Code(s): 27-4099

This certificate program is part of the Digital Media/Multimedia Technology (60) AS degree program (1611080103). At the completion of this program, the student will be able to:

01.0 Create, alter and/or adjust presentations utilizing a variety of digital media/multimedia technologies – the student will be able to:

01.01 Adapt learned skills and generate new approaches in order to solve unique production problems.

02.0 Use computer applications for digital media/multimedia projects – the student will be able to:

02.01 Demonstrate a basic proficiency with digital media/multimedia software packages.

02.02 Design and produce digital media/multimedia content.

02.03 Test, edit and de-bug digital media/multimedia content.

03.0 Produce digital media/multimedia projects – the student will be able to:

03.01 Create the written form of a story appropriate to the media selected.

03.02 Create and prepare a storyboard appropriate to the media selected.

03.03 Design navigational structure for interactive environments.

03.04 Organize resources and personnel to implement production.

03.05 Synthesize component elements of available digital media/multimedia technologies into a unified project.

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)

SkillsUSA is the intercurricular career and technical student organization(s) 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.

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: Digital Media/Multimedia Video Production
Career Cluster: Arts A/V Technology and Communication

CCC	
CIP Number	0609070210
Program Type	College Credit Certificate (CCC)
Program Length	12 credit hours
CTSO	SkillsUSA
SOC Codes (all applicable)	27-4099 – Media and Communication Equipment Workers, All Other

Purpose

The purpose of this program is to prepare students for initial employment as a videographer, video editor, or to provide supplemental training for persons previously or currently employed in these occupations.

This certificate program is part of the Digital Media/Multimedia Technology (60) AS degree program (1611080103).

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 Arts, A/V Technology and Communication 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 Arts, A/V Technology and Communication career cluster.

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

Standards

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

- 01.0 Design and generate video and/or animations in a multimedia project.
- 02.0 Produce digital media/multimedia projects.

Florida Department of Education
Student Performance Standards

Program Title: Digital Media/Multimedia Video Production
 CIP Number: 0609070210
 Program Length: 12 credit hours
 SOC Code(s): 27-4099

This certificate program is part of the Digital Media/Multimedia Technology (60) AS degree program (1611080103). At the completion of this program, the student will be able to:

01.0	Design and generate video and/or animations in a multimedia project – the student will be able to:
01.01	Capture, manipulate and apply a video and/or animation image in a digital media/multimedia project.
01.02	Differentiate and optimize video and/or animation formats.
01.03	Apply elements of design, principles of composition and qualities of light to video and/or animation in a digital media/multimedia project.
01.04	Integrate the use of video special effects into digital media/multimedia.
01.05	Evaluate moving image quality using appropriate application standards.
02.0	Produce digital media/multimedia projects – the student will be able to:
02.01	Create the written form of a story appropriate to the media selected.

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)

SkillsUSA is the intercurricular career and technical student organization(s) 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.

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: Digital Media/Multimedia Instructional Technology
Career Cluster: Arts A/V Technology and Communication

CCC	
CIP Number	0609070211
Program Type	College Credit Certificate (CCC)
Program Length	15 credit hours
CTSO	SkillsUSA
SOC Codes (all applicable)	27-4099 – Media and Communication Equipment Workers, All Other

Purpose

The purpose of this program is to prepare students for initial employment as an instructional developer, instructional media integrator, instructional media specialist, or to provide supplemental training for persons previously or currently employed in these occupations.

The content should include, but not be limited to, the design and production of digital media/multimedia projects using computer applications, and the demonstration of appropriate communication skills.

This certificate program is part of the Digital Media/Multimedia Technology (60) AS degree program (1611080103).

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 Arts, A/V Technology and Communication 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 Arts, A/V Technology and Communication career cluster.

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

Standards

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

- 01.0 Create, alter and/or adjust presentations utilizing a variety of digital media/multimedia technologies.
- 02.0 Use computer applications for digital media/multimedia projects.
- 03.0 Produce digital media/multimedia projects.
- 04.0 Demonstrate appropriate communication skills.

Florida Department of Education
Student Performance Standards

Program Title: Digital Media/Multimedia Instructional Technology
 CIP Number: 0609070211
 Program Length: 15 credit hours
 SOC Code(s): 27-4099

This certificate program is part of the Digital Media/Multimedia Technology (60) AS degree program (1611080103). At the completion of this program, the student will be able to:

01.0 Create, alter and/or adjust presentations utilizing a variety of digital media/multimedia technologies – the student will be able to:

01.01 Analyze the strengths and weaknesses of presentational media.

02.0 Use computer applications for digital media/multimedia projects – the student will be able to:

02.01 Demonstrate a basic proficiency with digital media/multimedia software packages.

02.02 Design and produce digital media/multimedia content.

03.0 Produce digital media/multimedia projects – the student will be able to:

03.01 Assess the needs of the end user or client.

03.02 Analyze available resources.

04.0 Demonstrate appropriate communication skills – the student will be able to:

04.01 Read and follow written and oral instructions.

04.02 Answer and ask questions coherently and concisely.

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)

SkillsUSA is the intercurricular career and technical student organization(s) 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.

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: Digital Media/Multimedia Presentation
Career Cluster: Arts A/V Technology and Communication

CCC	
CIP Number	0609070219
Program Type	College Credit Certificate (CCC)
Program Length	17 credit hours
CTSO	SkillsUSA
SOC Codes (all applicable)	43-9031 – Desktop Publishers

Purpose

The purpose of this program is to prepare students for initial employment as an audio/visual technician, audio technician, lighting technician, or to provide supplemental training for persons previously or currently employed in these occupations.

This certificate program is part of the Digital Media/Multimedia Technology (60) AS degree program (1611080103).

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 Arts, A/V Technology and Communication 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 Arts, A/V Technology and Communication career cluster.

The content should include, but not be limited to, the learning of management skills permitting the graduate to oversee the operation of institutional and industrial multiple media operations. Instruction includes: use of multimedia hardware and software, production analysis, the design and production of digital media/multimedia projects, digital media/multimedia management and the application of production skills to solving the problems relating to the integration of multiple media. Also included are skills relating to professionalism, employability, communication, and management.

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

Standards

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

- 01.0 Use industry standard digital media/multimedia hardware and software.
- 02.0 Create, alter and/or adjust presentations utilizing a variety of digital media/multimedia technologies.
- 03.0 Design and generate still imagery/graphics.
- 04.0 Design and execute audio technology for a digital media/multimedia project.
- 05.0 Use computer applications for digital media/multimedia projects.
- 06.0 Produce digital media/multimedia projects.

Florida Department of Education
Student Performance Standards

Program Title: Digital Media/Multimedia Presentation
 CIP Number: 0609070219
 Program Length: 17 credit hours
 SOC Code(s): 43-9031

This certificate program is part of the Digital Media/Multimedia Technology (60) AS degree program (1611080103). At the completion of this program, the student will be able to:

01.0 Use industry standard digital media/multimedia hardware and software – the student will be able to:

- 01.01 Demonstrate the proper care and handling of equipment used in digital media/multimedia.
- 01.02 Perform pre- and post-production routines for proper presentations.
- 01.03 Analyze equipment performance to meet industry standards.

02.0 Create, alter and/or adjust presentations utilizing a variety of digital media/multimedia technologies – the student will be able to:

- 02.01 Demonstrate the ability to locate appropriate production resources.
- 02.02 Utilize production techniques to create desired outcomes.
- 02.03 Adapt learned skills and generate new approaches in order to solve unique production problems.

03.0 Design and generate still imagery/graphics – the student will be able to:

- 03.01 Understand the properties of light and how to measure its intensity and color.

04.0 Design and execute audio technology for a digital media/multimedia project – the student will be able to:

- 04.01 Capture, manipulate and apply audio and sound in a digital media/multimedia project.
- 04.02 Differentiate and optimize formats for audio and sound.
- 04.03 Evaluate production needs for microphone applications.
- 04.04 Demonstrate proficiency with a multi-channel audio mixer.
- 04.05 Generate strategies for electronic editing.

04.06	Generate strategies for multi-track recording to industry standards.
05.0	Use computer applications for digital media/multimedia projects – the student will be able to:
05.01	Demonstrate a basic proficiency with digital media/multimedia software packages.
05.02	Present digital media/multimedia content.
06.0	Produce digital media/multimedia projects – the student will be able to:
06.01	Assess the needs of the end user or client.
06.02	Analyze available resources.
06.03	Create the written form of a story appropriate to the media selected.
06.04	Create and prepare a storyboard appropriate to the media selected.

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)

SkillsUSA is the intercurricular career and technical student organization(s) 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.

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: Digital Media/Multimedia Production
Career Cluster: Arts A/V Technology and Communication

CCC	
CIP Number	0610010507
Program Type	College Credit Certificate (CCC)
Program Length	15 credit hours
CTSO	SkillsUSA
SOC Codes (all applicable)	27-4099 – Media and Communication Equipment Workers, All Other

Purpose

The purpose of this program is to prepare students for initial employment as a digital media/multimedia production technician, digital media/multimedia developer, or to provide supplemental training for persons previously or currently employed in these occupations.

The content should include, but not be limited to, the use of multimedia hardware and software and the design and production of digital media/multimedia projects, including manipulation of video and/or animations and audio.

This certificate program is part of the Digital Media/Multimedia Technology (60) AS degree program (1611080103).

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 Arts, A/V Technology and Communication 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 Arts, A/V Technology and Communication career cluster.

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

Standards

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

- 01.0 Use industry standard digital media/multimedia hardware and software.
- 02.0 Create, alter and/or adjust presentations utilizing a variety of digital media/multimedia technologies.
- 03.0 Design and generate video and/or animations in a multimedia project.
- 04.0 Design and execute audio technology for a digital media/multimedia project.
- 05.0 Use computer applications for digital media/multimedia projects.
- 06.0 Produce digital media/multimedia projects.

Florida Department of Education
Student Performance Standards

Program Title: Digital Media/Multimedia Production
CIP Number: 0610010507
Program Length: 15 credit hours
SOC Code(s): 27-4099

This certificate program is part of the Digital Media/Multimedia Technology (60) AS degree program (1611080103). At the completion of this program, the student will be able to:

01.0 Use industry standard digital media/multimedia hardware and software – the student will be able to:

01.01 Analyze equipment performance to meet industry standards.

02.0 Create, alter and/or adjust presentations utilizing a variety of digital media/multimedia technologies – the student will be able to:

02.01 Analyze the strengths and weaknesses of presentational media.

02.02 Demonstrate the ability to locate appropriate production resources.

02.03 Utilize production techniques to create production outcomes.

02.04 Adapt learned skills and generate new approaches in order to solve unique production problems.

03.0 Design and generate video and/or animations in a multimedia project – the student will be able to:

03.01 Capture, manipulate and apply a video and/or animation image in a digital media/multimedia project.

03.02 Apply elements of design, principles of composition and qualities of light to video and/or animation in a digital media/multimedia project.

04.0 Design and execute audio technology for a digital media/multimedia project – the student will be able to:

04.01 Capture, manipulate and apply audio and sound in a digital media/multimedia project.

05.0 Use computer applications for digital media/multimedia projects – the student will be able to:

05.01 Demonstrate a basic proficiency with digital media/multimedia software packages.

05.02 Design and produce digital media/multimedia content.

05.03 Test, edit and de-bug digital media/multimedia content.

06.0	Produce digital media/multimedia projects – the student will be able to:
06.01	Assess the needs of the end user or client.
06.02	Analyze available resources.
06.03	Create the written form of a story appropriate to the media selected.
06.04	Create and prepare a storyboard appropriate to the media selected.
06.05	Synthesize component elements of available digital media/multimedia technologies into a unified project.

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)

SkillsUSA is the intercurricular career and technical student organization(s) 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.

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: Television Studio Production
Career Cluster: Arts A/V Technology and Communication

CCC	
CIP Number	0610010513
Program Type	College Credit Certificate (CCC)
Program Length	12 credit hours
CTSO	SkillsUSA
SOC Codes (all applicable)	27-4031 – Camera Operators, Television, Video, and Motion Picture

Purpose

The purpose of this program is to provide students with the basic skills required to produce broadcast quality television in the studio and professional video on location. Students learn studio and location lighting, multi-camera directing, audio recording and mixing, and digital video shooting and editing skills.

This certificate program is part of the Digital Television and Media Production (60) AS degree program (1609070213).

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 Arts, A/V Technology and Communication 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 Arts, A/V Technology and Communication career cluster.

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

Standards

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

- 01.0 Demonstrate the ability to collaborate with others.
- 02.0 Demonstrate safe and efficient work practices.
- 03.0 Create appropriate lighting for location and/or set productions.
- 04.0 Operate studio and field video cameras.
- 05.0 Record, mix and edit audio resources.
- 06.0 Operate control room equipment.
- 07.0 Organize and edit video resources.

Florida Department of Education
Student Performance Standards

Program Title: **Television Studio Production**
 CIP Number: **0610010513**
 Program Length: **12 credit hours**
 SOC Code(s): **27-4031**

This certificate program is part of the Digital Television and Media Production (60) AS degree program (1609070212). At the completion of this program, the student will be able to:

01.0	Demonstrate the ability to collaborate with others – the student will be able to:
01.01	Demonstrate ability to work as part of a team.
02.0	Demonstrate safe and efficient work practices – the student will be able to:
02.01	Follow industry safety rules, regulations and policies.
02.02	Demonstrate proper handling of hazardous materials.
02.03	Demonstrate awareness of appropriate ergonomics.
02.04	Demonstrate the proper care and use of equipment.
03.0	Create appropriate lighting for location and/or set productions – the student will be able to:
03.01	Use lighting equipment according to industry safety standards.
03.02	Use lighting for effect to control mood and impact in production settings.
04.0	Operate studio and field video cameras – the student will be able to:
04.01	Use current industry standard video production equipment.
04.02	Operate a camera in studio and location (field) production environments.
04.03	Demonstrate appropriate shot sequences, transitions, and post-production (editing) effects.
04.04	Control camera movement to obtain the required effects.
04.05	Control lens, focal length, aperture and exposure to obtain the required effects.

04.06	Perform appropriate pre-production checks of equipment function.
04.07	Define the various recording formats and media.
05.0	Record, mix and edit audio resources – the student will be able to:
05.01	Set up audio recording equipment.
05.02	Perform appropriate pre-production checks of production equipment.
06.0	Operate control room equipment – the student will be able to:
06.01	Define control room functions in a production.
06.02	Use the audio console (mixer) in a production.
06.03	Operate a production switcher.
07.0	Organize and edit video resources – the student will be able to:
07.01	Log and organize video resources.
07.02	Digitize video resources into post-production equipment and workflow.

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)

SkillsUSA is the intercurricular career and technical student organization(s) 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.

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: Broadcast Production
Career Cluster: Arts A/V Technology and Communication

CCC	
CIP Number	0610020216
Program Type	College Credit Certificate (CCC)
Program Length	24 credit hours
CTSO	SkillsUSA
SOC Codes (all applicable)	27-4031 – Camera Operators, Television, Video, and Motion Picture

Purpose

The purpose of this program is to prepare students for employment as broadcast production technicians or to provide supplemental training for persons previously or currently employed in these occupations.

This certificate program is part of the Digital Television and Media Production (60) AS degree program (160907213).

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.).

The content includes, but is not limited to, television, broadcast, video, design and Internet media training. This program focuses on broad transferable skills and stresses understanding and demonstration of the following elements of the television video and Internet/webcast industries: working as part of a team, safe and efficient work practices, use of lighting equipment, operation of video camera, set up and use of audio recording equipment, operation of control room equipment, and organization and editing of video resources.

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 Arts, A/V Technology and Communication 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 Arts, A/V Technology and Communication career cluster.

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

Standards

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

- 01.0 Demonstrate the ability to collaborate with others.
- 02.0 Demonstrate safe and efficient work practices.
- 03.0 Generate a production schedule.
- 04.0 Plan a production set.
- 05.0 Create appropriate lighting for location and/or set productions.
- 06.0 Operate studio and field video cameras.
- 07.0 Record, mix and edit audio resources
- 08.0 Operate control room equipment.
- 09.0 Organize and edit video resources.

Florida Department of Education
Student Performance Standards

Program Title: Broadcast Production
 CIP Number: 0610020216
 Program Length: 24 credit hours
 SOC Code(s): 27-4031

This certificate program is part of the Digital Television and Media Production (60) AS degree program (1609070213). At the completion of this program, the student will be able to:

01.0 Demonstrate the ability to collaborate with others – the student will be able to:

01.01 Demonstrate the ability to work as part of a team.

02.0 Demonstrate safe and efficient work practices – the student will be able to:

02.01 Follow industry safety rules, regulations and policies.

02.02 Demonstrate proper handling of hazardous materials.

02.03 Demonstrate awareness of appropriate ergonomics.

02.04 Demonstrate the proper care and use of equipment.

03.0 Generate a production schedule – the student will be able to:

03.01 Define the segment or program type.

04.0 Plan a production set – the student will be able to:

04.01 Define the set requirements for a specific program type.

05.0 Create appropriate lighting for location and/or set productions – the student will be able to:

05.01 Determine appropriate lighting needs for production settings.

05.02 Identify locations and studio lighting types, methods of use and application.

05.03 Use lighting equipment according to industry safety standards.

05.04 Define light quality in terms of intensity, color, direction and characteristics.

05.05	Light a location set with ambient/available and supplemental lighting.
05.06	Use lighting for effect to control mood and impact in production settings.
05.07	Use studio lighting master control equipment.
06.0	Operate studio and field video cameras – the student will be able to:
06.01	Use current industry standard video production equipment.
06.02	Operate a camera in studio and location (field) production environments.
06.03	Plan a shot to obtain required action/footage.
06.04	Control camera movement to obtain the required effects.
06.05	Control lens, focal length, aperture and exposure to obtain the required effects.
06.06	Set up the camera and recording equipment sequence.
06.07	Perform appropriate pre-production checks of equipment function.
06.08	Define the various recording formats and media.
07.0	Record, mix and edit audio resources – the student will be able to
07.01	Identify and select microphones for production needs.
07.02	Determine optimal microphone placement.
07.03	Set up audio recording equipment.
07.04	Establish appropriate recording conditions.
07.05	Perform appropriate pre-production checks of production equipment.
07.06	Perform sound edits and enhancements.
07.07	Record location sound.
07.08	Record studio live sound.
08.0	Operate control room equipment – the student will be able to:
08.01	Define control room functions in a production.

08.02	Use the audio console (mixer) in a production.
08.03	Operate visual control equipment.
08.04	Operate a production switcher.
08.05	Operate the routing switcher according to production requirements.
09.0	Organize and edit video resources – the student will be able to:
09.01	Log and organize video resources.
09.02	Operate editing hardware and software.
09.03	Digitize video resources into post-production equipment and workflow.

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)

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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: Digital Video Fundamentals
Career Cluster: Arts A/V Technology and Communication

CCC	
CIP Number	0610030414
Program Type	College Credit Certificate (CCC)
Program Length	12 credit hours
CTSO	SkillsUSA
SOC Codes (all applicable)	27-4031 – Camera Operators, Television, Video, and Motion Picture

Purpose

The purpose of this program is to provide students with an introduction to video production; students will gain the knowledge and skills necessary for video production to include, but not be limited to, videography and video editing for the creation of video-based projects.

This certificate program is part of the Digital Television and Media Production (60) AS degree program (1609070213).

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 Arts, A/V Technology and Communication 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 Arts, A/V Technology and Communication career cluster.

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

Standards

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

- 01.0 Demonstrate the ability to collaborate with others.
- 02.0 Demonstrate safe and efficient work practices.
- 03.0 Create appropriate lighting for location and/or set productions.
- 04.0 Operate studio and field video cameras.
- 05.0 Record, mix and edit audio resources.
- 06.0 Organize and edit video resources.

Florida Department of Education
Student Performance Standards

Program Title: Digital Video Fundamentals
CIP Number: 0610030414
Program Length: 12 credit hours
SOC Code(s): 27-4031

This certificate program is part of the Digital Television and Media Production (60) AS degree program (1609070213). At the completion of this program, the student will be able to:

01.0 Demonstrate the ability to collaborate with others – the student will be able to:

01.01 Demonstrate the ability to work as part of a team.

02.0 Demonstrate safe and efficient work practices – the student will be

02.01 Follow industry safety rules, regulations and policies.

02.02 Demonstrate proper handling of hazardous materials.

02.03 Demonstrate awareness of appropriate ergonomics.

02.04 Demonstrate proper care and use of equipment.

03.0 Create appropriate lighting for location and/or set productions – the student will be able to:

03.01 Use lighting equipment according to industry safety standards.

03.02 Define light quality in terms of intensity, color, direction and characteristics.

03.03 Light a location set with ambient/available and supplemental lighting.

04.0 Operate studio and field video cameras – the student will be able to:

04.01 Use current industry standard video production equipment.

04.02 Operate a camera in studio and location (field) production environments.

04.03 Plan a shot to obtain the required action/footage.

04.04 Demonstrate appropriate shot sequences, transitions and post-production (edit) effects.

04.05	Control camera movement to obtain the required effects.
04.06	Control lens, focal length, aperture and exposure to obtain the required effects.
04.07	Perform appropriate pre-production checks of equipment function.
04.08	Define the various recording formats and media.
05.0	Record, mix and edit audio resources – the student will be able to:
05.01	Identify and select microphones for production needs.
05.02	Set up audio recording equipment.
05.03	Perform appropriate pre-production checks of production equipment.
06.0	Organize and edit video resources – the student will be able to:
06.01	Log and organize video resources.
06.02	Operate editing hardware and software.

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)

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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: **Graphic Design Support**
Career Cluster: **Arts, A/V Technology and Communication**

CCC	
CIP Number	0611080302
Program Type	College Credit Certificate (CCC)
Program Length	15 credit hours
CTSO	SkillsUSA
SOC Codes (all applicable)	27-1024 – Graphic Designers

Purpose

The purpose of this program is to prepare students for initial employment as a graphic design assistant, graphic production artist, or to provide supplemental training for persons previously or currently employed in these occupations.

This certificate program is part of the Graphics Technology AS degree program (1611080300).

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 Arts, A/V Technology and Communication 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 Arts, A/V Technology and Communication career cluster.

The content includes, but is not limited to, communication skills, illustration, design concepts and theory, typography skills, production skills, color theories, utilization of computers to produce electronic content, presentation procedures, and employability skills.

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

Standards

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

- 01.0 Demonstrate effective interpersonal communication skills.
- 02.0 Perform raster-based and vector-based visual solutions.
- 03.0 Formulate concepts/theories.
- 04.0 Apply design and color theories.
- 05.0 Demonstrate technical and creative uses of typography.
- 06.0 Demonstrate production skills in web and print design.
- 07.0 Interpret printing processes.
- 08.0 Demonstrate knowledge of current industry standards, practices, and techniques.
- 09.0 Demonstrate industry-level presentation techniques.
- 10.0 Utilize computer hardware, software, networks and peripherals for the production of electronic content.
- 11.0 Create electronic interfaces.
- 12.0 Demonstrate employability skills.

Florida Department of Education
Student Performance Standards

Program Title: Graphic Design Support
 CIP Number: 0611080302
 Program Length: 15 credit hours
 SOC Code(s): 27-1024

This certificate program is part of the Graphics Technology AS degree program (1611080300). At the completion of this program, the student will be able to:

01.0	Demonstrate effective interpersonal communication skills – the student will be able to:
01.01	Read and interpret written and oral instructions.
01.02	Prepare written correspondence.
01.03	Demonstrate effective oral communication and presentation skills.
02.0	Create raster-based and vector-based visual solutions – the student will be able to:
02.01	Demonstrate knowledge of methods and materials.
03.0	Formulate concepts/theories – the student will be able to:
03.01	Solve problems by selecting the appropriate styles or techniques.
03.02	Apply principles of design.
03.03	Demonstrate the design process.
04.0	Apply design and color theories – the student will be able to:
04.01	Create mockups, dummies, and comprehensive layouts in a variety of formats.
04.02	Evaluate the use of design principles for a variety of graphic design applications.
05.0	Demonstrate technical and creative uses of typography – the student will be able to:
05.01	Demonstrate application of typographical specifications.
05.02	Apply correct lettering and line spacing for typesetting.

05.03	Develop a working knowledge of type spacing.
05.04	Demonstrate the principles of typography in a design project.
06.0	Demonstrate production skills in web and print design – the student will be able to:
06.01	Size photographs and illustrations.
06.02	Demonstrate correct preparation of electronic files for various printed and electronic outputs.
06.03	Utilize appropriate industry-standard software to execute design solutions.
07.0	Interpret printing processes – the student will be able to:
07.01	Explain basic print processes.
08.0	Demonstrate knowledge of current industry standards, practices, and techniques – the student will be able to:
08.01	Use industry terminology.
08.02	Explain the importance of meeting deadlines.
08.03	Demonstrate the ability to adjust to work conditions.
09.0	Demonstrate industry-level presentation techniques – the student will be able to:
09.01	Demonstrate mounting and matting procedures.
09.02	Demonstrate industry presentation procedures and techniques.
10.0	Utilize computer hardware, software, networks, and peripherals for the production of electronic content – the student will be able to:
10.01	Demonstrate an understanding of platforms, operating systems, coding languages, hardware, software, peripherals, network issues, and compatibility.
11.0	Create electronic interfaces – the student will be able to:
11.01	Create vector-based or raster-based layouts that appropriate translate to a variety of electronic formats.
12.0	Demonstrate employability skills – the student will be able to:
12.01	Identify acceptable work habits.

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)

SkillsUSA is the intercurricular career and technical student organization(s) 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.

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: Graphic Design Production
Career Cluster: Arts, A/V Technology and Communication

CCC	
CIP Number	0611080303
Program Type	College Credit Certificate (CCC)
Program Length	24 credit hours
CTSO	SkillsUSA
SOC Codes (all applicable)	27-1024 – Graphic Designers

Purpose

The purpose of this program is to prepare students for initial employment as graphic designers or graphic design assistants; this program introduces students to the principles of design and photography with an emphasis on computer-based design, layout, multimedia, and interactive design.

This certificate program is part of the Graphics Technology AS degree program (1611080300).

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 Arts, A/V Technology and Communication 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 Arts, A/V Technology and Communication career cluster.

The content includes, but is not limited to, communication skills, team skills, safe and efficient work practices, creation of advertising layouts, illustration, design concepts and theory, typography skills, production skills, color theories, utilization of computers to produce electronic content, presentation procedures, and employability skills.

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

Standards

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

- 01.0 Demonstrate effective interpersonal communication skills.
- 02.0 Demonstrate the ability to collaborate with others.
- 03.0 Demonstrate safe and efficient work practices.
- 04.0 Create raster-based and vector-based visual solutions.
- 05.0 Formulate concepts/theories.
- 06.0 Apply design and color theories.
- 07.0 Demonstrate technical and creative uses of typography.
- 08.0 Create advertising design solutions.
- 09.0 Demonstrate production skills in web and print design.
- 10.0 Interpret printing processes.
- 11.0 Demonstrate knowledge of current industry standards, practices, and techniques.
- 12.0 Demonstrate industry-level presentation techniques.
- 13.0 Utilize computer hardware, software, networks and peripherals for the production of electronic content.
- 14.0 Create electronic interfaces.
- 15.0 Demonstrate employability skills.

Florida Department of Education
Student Performance Standards

Program Title: Graphic Design Production
 CIP Number: 0611080303
 Program Length: 24 credit hours
 SOC Code(s): 27-1024

This certificate program is part of the Graphics Technology AS degree program (1611080300). At the completion of this program, the student will be able to:

01.0 Demonstrate effective interpersonal communication skills – the student will be able to:

01.01 Read and interpret written and oral instructions.

01.02 Prepare written correspondence.

01.03 Demonstrate effective oral communication and presentation skills.

01.04 Present work to an audience.

02.0 Demonstrate the ability to collaborate with others – the student will be able to:

02.01 Demonstrate the ability to work as part of a team.

03.0 Demonstrate safe and efficient work practices – the student will be able to:

03.01 Demonstrate proper care of equipment.

03.02 Demonstrate typical workplace tasks in a timely manner.

04.0 Create raster-based and vector-based visual solutions – the student will be able to:

04.01 Demonstrate versatile styles and techniques to solve visual problems.

04.02 Demonstrate knowledge of methods and materials.

04.03 Apply design fundamentals to raster-based and vector-based solutions to effectively achieve a visual communication goal.

05.0 Formulate concepts/theories – the student will be able

05.01 Solve problems by selecting the appropriate styles or techniques.

05.02	Display creative talent and ingenuity.
05.03	Apply principles of design.
05.04	Demonstrate the design process.
06.0	Apply design and color theories – the student will be able to:
06.01	Create a design utilizing the appropriate technical color application for the intended output.
06.02	Create mockups, dummies, and comprehensive layouts in a variety of formats.
06.03	Evaluate the use of design principles for a variety of graphic design applications.
06.04	Select and apply appropriate design principles for effective visual communication.
06.05	Apply knowledge of color theory to design solutions.
06.06	Develop solutions for interactive media that demonstrate awareness of the user experience.
07.0	Demonstrate technical and creative uses of typography – the student will be able to:
07.01	Develop and demonstrate appropriate use of type styles and letter forms.
07.02	Demonstrate application of typographical specifications.
07.03	Apply type construction design.
07.04	Apply correct lettering and line spacing for typesetting.
07.05	Develop a working knowledge of type spacing.
07.06	Demonstrate the principles of typography in a design project.
07.07	Utilize a desktop computer and industry standard software for type production.
07.08	Develop and properly utilize a typographic grid.
08.0	Create advertising design solutions – the student will be able to:
08.01	Identify advertising needs and develop appropriate solutions.
08.02	Produce comprehensive layouts for advertising in a variety of print, packaging, outdoor, and electronic formats.
09.0	Demonstrate production skills in web and print design – the student will be able to:

09.01	Size photographs and illustrations.
09.02	Demonstrate correct preparation of electronic files for various printed and electronic outputs.
09.03	Utilize appropriate industry-standard software to execute design solutions.
10.0	Interpret printing processes – the student will be able to:
10.01	Determine methods of printing; include specialized printing methods.
10.02	Select appropriate substrates and inks for projects.
10.03	Explain color separation processes.
10.04	Identify and specify half-tone and line negatives.
10.05	Interpret signature and imposition procedures.
10.06	Analyze and identify methods of proofing.
10.07	Explain basic print processes.
10.08	Understand how various printing processes require different electronic pre-press techniques.
11.0	Demonstrate knowledge of current industry standards, practices, and techniques – the student will be able to:
11.01	Explain copyright procedures.
11.02	Use industry terminology.
11.03	Identify industry practices and procedures.
11.04	Explain the importance of meeting deadlines.
11.05	Demonstrate the ability to adjust to work conditions.
12.0	Demonstrate industry-level presentation techniques – the student will be able to:
12.01	Demonstrate mounting and matting procedure.
12.02	Demonstrate industry presentation procedures and techniques.
13.0	Utilize computer hardware, software, networks, and peripherals for the production of electronic content – the student will be able to:
13.01	Demonstrate an understanding of platforms, operating systems, coding languages, hardware, software, peripherals, network issues, and compatibility.

14.0 Create electronic interfaces – the student will be able to:

14.01 Create vector-based or raster-based layouts that appropriately translate to a variety of electronic formats.

15.0 Demonstrate employability skills – the student will be able to:

15.01 Identify acceptable work habits.

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)

SkillsUSA is the intercurricular career and technical student organization(s) 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.

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: Interactive Media Production
Career Cluster: Arts, A/V Technology and Communication

CCC	
CIP Number	0611080304
Program Type	College Credit Certificate (CCC)
Program Length	24 credit hours
CTSO	SkillsUSA
SOC Codes (all applicable)	27-1024 – Graphic Designers

Purpose

The purpose of this program is to provide students with a foundation in interactive media techniques and production; students will gain competency in web-based and interactive design.

This certificate program is part of the Graphics Technology AS degree program (1611080300).

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 Arts, A/V Technology and Communication 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 Arts, A/V Technology and Communication career cluster.

The content includes, but is not limited to, communication skills, team skills, illustration, design concepts and theory, typography skills, production skills, creation of advertising layouts, color theories, utilization of computers to produce electronic content, presentation procedures, and employability skills.

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

Standards

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

- 01.0 Demonstrate effective interpersonal communication skills.
- 02.0 Demonstrate the ability to collaborate with others.
- 03.0 Demonstrate safe and efficient work practices.
- 04.0 Create raster-based and vector-based visual solutions.
- 05.0 Formulate concepts/theories.
- 06.0 Apply design and color theories.
- 07.0 Demonstrate technical and creative uses of typography.
- 08.0 Create advertising design solutions.
- 09.0 Demonstrate production skills in web and print design.
- 10.0 Demonstrate knowledge of current industry standards, practices, and techniques.
- 11.0 Demonstrate industry-level presentation techniques.
- 12.0 Utilize computer hardware, software, networks and peripherals for the production of electronic content.
- 13.0 Create electronic interfaces.
- 14.0 Demonstrate employability skills.

Florida Department of Education
Student Performance Standards

Program Title: Interactive Media Production
CIP Number: 0611080304
Program Length: 24 credit hours
SOC Code(s): 27-1024

This certificate program is part of the Graphics Technology AS degree program (1611080300). At the completion of this program, the student will be able to:

01.0 Demonstrate effective interpersonal communication skills – the student will be able to:

01.01 Read and interpret written and oral instructions.

01.02 Demonstrate effective oral communication and presentation skills.

01.03 Present work to an audience.

02.0 Demonstrate the ability to collaborate with others – the student will be able to:

02.01 Demonstrate the ability to work as part of a team.

03.0 Demonstrate safe and efficient work practices – the student will be able to:

03.01 Demonstrate proper care of equipment.

03.02 Perform typical workplace tasks in a timely manner.

04.0 Create raster-based and vector-based visual solutions – the student will be able to:

04.01 Demonstrate versatile styles and techniques to solve visual problems.

04.02 Demonstrate knowledge of methods and materials.

04.03 Execute raster and vector solutions in accordance with industry technical requirements for print and/or digital formats.

05.0 Formulate concepts/theories – the student will be able to:

05.01 Solve problems by selecting the appropriate styles or techniques.

05.02 Display creative talent and ingenuity.

05.03	Apply principles of design.
05.04	Demonstrate the design process.
06.0	Apply design and color theories – the student will be able to:
06.01	Create a design utilizing the appropriate technical color application for the intended output.
06.02	Create mockups, dummies, and comprehensive layouts in a variety of formats.
06.03	Evaluate the use of design principles for a variety of graphic design applications.
06.04	Select and apply appropriate design principles for effective visual communication.
06.05	Apply knowledge of color theory to design solutions.
06.06	Develop solutions for interactive media that demonstrate awareness of the user experience.
07.0	Demonstrate technical and creative uses of typography – the student will be able to:
07.01	Develop and demonstrate appropriate use of type styles and letter forms.
07.02	Demonstrate application of typographical specifications.
07.03	Apply type construction design.
07.04	Apply correct lettering and line spacing for typesetting.
07.05	Demonstrate the principles of typography in a design project.
07.06	Utilize a desktop computer and industry standard software for type production.
08.0	Create advertising design solutions – the student will be able to:
08.01	Identify advertising needs and develop appropriate solutions.
09.0	Demonstrate production skills in web and print design – the student will be able to:
09.01	Size photographs and illustrations.
09.02	Demonstrate correct preparation of electronic files for various printed and electronic outputs.
09.03	Utilize appropriate industry-standard software to execute design solutions.
10.0	Demonstrate knowledge of current industry standards, practices, and techniques – the student will be able to:

10.01	Explain copyright procedures.
10.02	Use industry terminology.
10.03	Identify industry practices and procedures.
10.04	Explain the importance of meeting deadlines.
10.05	Learn how to cope with stress.
11.0	Demonstrate industry-level presentation techniques – the student will be able to:
11.01	Demonstrate industry presentation procedures and techniques.
12.0	Utilize computer hardware, software, networks, and peripherals for the production of electronic content – the student will be able to:
12.01	Demonstrate an understanding of platforms, operating systems, coding languages, hardware, software, peripherals, network issues, and compatibility.
13.0	Create electronic interfaces – the student will be able to:
13.01	Create vector-based or raster-based layouts that appropriately translate to a variety of electronic formats.
13.02	Create interactive content for websites.
14.0	Demonstrate employability skills – the student will be able to:
14.01	Identify acceptable work habits.

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)

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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: Network Communications (LAN)
Career Cluster: Arts, A/V Technology and Communication

CCC	
CIP Number	0611100206
Program Type	College Credit Certificate (CCC)
Program Length	18 credit hours
CTSO	SkillsUSA
SOC Codes (all applicable)	15-1142 – Network and Computer Systems Administrators

Purpose

This program is designed to prepare students for employment as a network support technician, telecommunications technician, field support engineer, sub-system specialist, communications specialist, or to provide supplemental training to persons previously or currently employed in these occupations.

This specialization content includes, but is not limited to, basic electronics skills, telephony cabling and network communications.

This certificate program is part of the Telecommunication Engineering Technology AS degree program (1615030302).

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 Arts, A/V Technology and Communication 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 Arts, A/V Technology and Communication career cluster.

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

Standards

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

- 01.0 Demonstrate knowledge of basic electronics.
- 02.0 Demonstrate proficiency in network communications.
- 03.0 Demonstrate proficiency in the analysis of telephony communications systems.

Florida Department of Education
Student Performance Standards

Program Title: Network Communications (LAN)
CIP Number: 0611100206
Program Length: 18 credit hours
SOC Code(s): 15-1142

This certificate program is part of the Telecommunication Engineering Technology AS degree program (1615030302). At the completion of this program, the student will be able to:

01.0	Demonstrate knowledge of basic electronics – the student
01.01	Perform various types of soldering.
01.02	Perform various types of wiring and cable terminations.
01.03	Demonstrate knowledge of AC/DC concepts and applications.
01.04	Demonstrate knowledge of computer systems and basic applications.
01.05	Demonstrate use of basic test and measurement equipment.
01.06	Understand and demonstrate safety rules.
01.07	Demonstrate understanding of digital fundamentals.
02.0	Demonstrate proficiency in network communications – the student will be able to:
02.01	Describe the layers of a communications system.
02.02	Describe the protocol requirements necessary to ensure the transmission of a data message.
02.03	Describe, from a system standpoint, the characteristics of serial communications standards.
02.04	Analyze and troubleshoot communications between computers.
02.05	Compare serial communications with parallel and other standards.
02.06	Describe, analyze, troubleshoot and demonstrate the operation of network access devices.
02.07	Demonstrate use of a network management system.

02.08	Identify the capabilities of a telephone circuit on a data communications system.
02.09	Describe LAN topologies as applied to data networks.
02.10	Design, connect and troubleshoot a Local Area Network (LAN).
02.11	Fabricate and test LAN cabling.
02.12	Describe basic data firewalls, encryption and decryption methods.
02.13	Describe the general characteristics and operations of frame relay, DSL, and ISDN as they apply to data networks.
02.14	Describe the general characteristics and operations of routers and switches as they apply to data networks and systems.
03.0	Demonstrate proficiency in the analysis of telephony communication systems – the student will be able to:
03.01	Describe the general characteristics of a telephone subscriber loop.
03.02	Describe, evaluate and analyze the operation of a MODEM in the originate and answer modes.
03.03	Describe the various functions of a BORSCHT (Battery Overload Ring Supervision Coding Hybrid Test) circuit.
03.04	Describe and evaluate the application of fiber optic systems to telecommunications.
03.05	Describe the operation of an integrated voice and data system.

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)

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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: Network Communications (WAN)
Career Cluster: Arts, A/V Technology and Communication

CCC	
CIP Number	0611100207
Program Type	College Credit Certificate (CCC)
Program Length	18 credit hours
CTSO	SkillsUSA
SOC Codes (all applicable)	15-1142 – Network and Computer Systems Administrators

Purpose

This program is designed to prepare students for employment as a WAN support specialist, network designer, WAN technician, network support technician, field support engineer, or to provide supplemental training to persons previously or currently employed in these occupations. This specialization content includes, but is not limited to, basic electronics skills, telephony cabling and network communications

This specialization content includes, but is not limited to, basic electronics skills, telephony cabling and network communications.

This certificate program is part of the Telecommunication Engineering Technology AS degree program (1615030302).

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 Arts, A/V Technology and Communication 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 Arts, A/V Technology and Communication career cluster.

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

Standards

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

- 01.0 Demonstrate knowledge of basic electronics.
- 02.0 Demonstrate proficiency in network communications.
- 03.0 Demonstrate proficiency in the analysis of telephony communication systems.

Florida Department of Education
Student Performance Standards

Program Title: Network Communications (WAN)
 CIP Number: 0611100207
 Program Length: 18 credit hours
 SOC Code(s): 15-1142

This certificate program is part of the Telecommunication Engineering Technology AS degree program (1615030302). At the completion of this program, the student will be able to:

01.0 Demonstrate knowledge of basic electronics – the student will be able to:

- 01.01 Perform various types of soldering.
- 01.02 Perform various types of wiring and cable terminations.
- 01.03 Demonstrate knowledge of AC/DC concepts and applications.
- 01.04 Demonstrate knowledge of computer systems and basic applications.
- 01.05 Demonstrate use of basic test and measurement equipment.
- 01.06 Understand and demonstrate safety rules.
- 01.07 Demonstrate understanding of digital fundamentals.

02.0 Demonstrate proficiency in network communications – the student will be able to:

- 02.01 Describe the layers of a communications system.
- 02.02 Describe the protocol requirements necessary to ensure the transmission of a data message.
- 02.03 Describe, from a system standpoint, the characteristics of serial communications standards.
- 02.04 Analyze and troubleshoot communications between computers.
- 02.05 Compare serial communications with parallel and others.
- 02.06 Describe, analyze, troubleshoot and demonstrate the operation of network access devices.
- 02.07 Demonstrate use of a network management system.

02.08	Identify the capabilities of a telephone circuit on a data communications system.
02.09	Describe WAN topologies as applied to data networks.
02.10	Describe basic data firewalls, encryption and decryption methods.
02.11	Describe the general characteristics and operations of frame relay, DSL, and ISDN as they apply to data networks.
02.12	Describe the characteristics of frame relay network management.
02.13	Describe the general characteristics and operations of routers and switches as they apply to data networks and systems.
02.14	Describe the general characteristics and design capabilities of the T-carrier system.
02.15	Analyze the network design criteria of T-1 systems.
02.16	Describe the general characteristics and design capabilities of the Synchronous Optical Network (SONET).
02.17	Describe the characteristics of the Asynchronous Transfer Mode (ATM) network.
02.18	Describe the characteristics of high-speed public data networks.
02.19	Apply the theory of wide area network design to systems.
03.0	Demonstrate proficiency in the analysis of telephony communication systems – the student will be able to:
03.01	Describe the general characteristics of a telephone subscriber loop.

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)

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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: **Wireless Communications**
Career Cluster: **Arts, A/V Technology and Communication**

CCC	
CIP Number	0615030508
Program Type	College Credit Certificate (CCC)
Program Length	18 credit hours
CTSO	SkillsUSA
SOC Codes (all applicable)	15-1142 – Network and Computer Systems Administrators

Purpose

This program is designed to prepare students for employment as a wireless installer, wireless technician, wireless field service technician, or to provide supplemental training to persons previously or currently employed in these occupations.

This specialization content includes, but is not limited to, basic electronics skills, transmission and distribution systems, telephony communication systems, digital communications, data communications and network communications.

This certificate program is part of the Telecommunication Engineering Technology AS degree program (1615030302).

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 Arts, A/V Technology and Communication 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 Arts, A/V Technology and Communication career cluster.

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

Standards

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

- 01.0 Demonstrate knowledge of basic electronics.
- 02.0 Demonstrate proficiency in basic operation and application of transmitters, receivers, and transmission and distribution systems.
- 03.0 Demonstrate proficiency in design and analysis of digital communications systems.
- 04.0 Demonstrate proficiency in the analysis of transmission and distribution systems.
- 05.0 Demonstrate proficiency in network communications.
- 06.0 Demonstrate proficiency in the analysis of telephony communication systems.

Florida Department of Education
Student Performance Standards

Program Title: **Wireless Communications**
 CIP Number: **0615030508**
 Program Length: **18 credit hours**
 SOC Code(s): **15-1142**

This certificate program is part of the Telecommunication Engineering Technology AS degree program (1615030302). At the completion of this program, the student will be able to:

01.0	Demonstrate knowledge of basic electronics – the student will be able to:
01.01	Perform various types of soldering.
01.02	Perform various types of wiring and cable terminations.
01.03	Demonstrate knowledge of AC/DC concepts and applications.
01.04	Demonstrate knowledge of computer systems and basic applications.
01.05	Demonstrate use of basic test and measurement equipment.
01.06	Understand and demonstrate safety rules.
01.07	Demonstrate understanding of digital fundamentals.
02.0	Demonstrate proficiency in basic operation and application of transmitters, receivers, and transmission and distribution systems – the student will be able to:
02.01	Describe the principles and operation of amplitude modulation and frequency modulation.
02.02	Demonstrate an understanding of block diagrams and components of transmitter receiver circuits including mixers, IF amplifiers, local oscillators, modulators and demodulators.
02.03	Identify, measure, analyze and troubleshoot AM and FM transmitter/receiver circuits including mixers, IF amplifiers, local oscillators, modulators, demodulators and speech amplifiers.
02.04	Analyze, troubleshoot, and maintain transmitters and receivers, to include heterodyning, frequency synthesis, phase-locked-loop, filtering and automatic control circuits.
02.05	Describe the components and concepts of transmission systems: antennas, fiber optics, coax, copper, microwave, satellite, feed lines, and wave guides.
02.06	Calculate transmission line characteristics and understand impedance matching.

02.07	Analyze and describe the concepts of radio wave propagation and radiation fields.
02.08	Test, set up and adjust antenna systems using a power meter, network analyzer, and SWR meter.
02.09	Describe government rules, regulations, and permits.
03.0	Demonstrate proficiency in design and analysis of digital communications systems – the student will be able to:
03.01	Describe industry standards in digital communications.
04.0	Demonstrate proficiency in the analysis of transmission and distribution systems – the student will be able to:
04.01	Splice and terminate cabling systems.
04.02	Describe gain and loss concepts as applied to transmission and distribution systems.
05.0	Demonstrate proficiency in network communications – the student will be able to:
05.01	Describe the layers of a communications system.
05.02	Describe the protocol requirements necessary to ensure the transmission of a data message.
05.03	Describe, analyze, troubleshoot and demonstrate the operation of network access devices.
05.04	Describe wireless topologies as applied to data networks.
05.05	Design, connect and troubleshoot a wireless network.
05.06	Describe the operation of a short-range wireless network (i.e. Blue Tooth, IEEE 802.11).
05.07	Describe the operation of a long-range wireless network (i.e. PCS, digital messaging, 3G Technology).
05.08	Describe the operation of a cellular communications network.
05.09	Describe and analyze error detection and correction methods used in data communication systems.
06.0	Demonstrate proficiency in the analysis of telephony communication systems – the student will be able to:
06.01	Describe the general characteristics of a telephone subscriber loop.
06.02	Describe, demonstrate and analyze the operation of tone dialing, DTMF (Dual Tone Multi Frequency), pulse dialing and ringing circuits.
06.03	Describe, evaluate and analyze the operation of a MODEM in the originate and answer modes.
06.04	Describe the various functions of a BORSCHT (Battery Overload Ring Supervision Coding Hybrid Test) circuit.

06.05 Describe, evaluate and analyze the operation of a Subscriber Loop Interface Circuit (SLIC).

06.06 Describe, evaluate and analyze the operation of a Time-Slot Assignment Circuit (TSAC).

06.07 Describe and evaluate the application of fiber optic systems to telecommunications.

06.08 Analyze and describe applications of speech synthesis and recognition circuits to telecommunications.

06.09 Terminate and test telephony cable.

06.10 Describe the operation of an integrated voice and data system.

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)

SkillsUSA is the intercurricular career and technical student organization(s) 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.

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: Cable Installation
Career Cluster: Arts, A/V Technology and Communication

CCC	
CIP Number	0647010304
Program Type	College Credit Certificate (CCC)
Program Length	12 credit hours
CTSO	SkillsUSA
SOC Codes (all applicable)	49-2094 – Electrical and Electronics Repairers, Commercial and Industrial Equipment

Purpose

This program is designed to prepare students for employment as a cable installer, cable tester, cable technician, or to provide supplemental training to persons previously or currently employed in these occupations. This specialization content includes, but is not limited to, basic electronics skills, transmission and distribution systems, cabling, and network communications.

This certificate program is part of the Telecommunication Engineering Technology AS degree program (1615030302).

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 Arts, A/V Technology and Communication 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 Arts, A/V Technology and Communication career cluster.

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

Standards

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

- 01.0 Demonstrate knowledge of basic electronics.
- 02.0 Demonstrate proficiency in basic operation and application of transmitters, receivers, and transmission and distribution systems.
- 03.0 Demonstrate proficiency in the analysis of transmission and distribution systems.
- 04.0 Demonstrate proficiency in network communications.
- 05.0 Demonstrate proficiency in the analysis of telephony communication systems.
- 06.0 Demonstrate proficiency in the analysis of analog and digital video systems.

Florida Department of Education
Student Performance Standards

Program Title: Cable Installation
 CIP Number: 0647010304
 Program Length: 12 credit hours
 SOC Code(s): 49-2094

This certificate program is part of the Telecommunication Engineering Technology AS degree program (1615030302). At the completion of this program, the student will be able to:

01.0 Demonstrate knowledge of basic electronics – the student will be able to:

01.01 Perform various types of soldering.

01.02 Perform various types of wiring and cable terminations.

01.03 Demonstrate knowledge of AC/DC concepts and applications.

01.04 Demonstrate knowledge of computer systems and basic applications.

01.05 Demonstrate use of basic test and measurement equipment.

01.06 Understand and demonstrate safety rules.

01.07 Demonstrate understanding of digital fundamentals.

02.0 Demonstrate proficiency in basic operation and application of transmitters, receivers, and transmission and distribution systems – the student will be able to:

02.01 Calculate transmission line characteristics and understand impedance matching.

02.01 Test, set up and adjust antenna systems using a power meter, network analyzer, and SWR meter.

03.0 Demonstrate proficiency in the analysis of transmission and distribution systems – the student will be able to:

03.01 Analyze and demonstrate the operation of optical devices.

03.02 Splice and terminate cabling systems.

03.03 Analyze and demonstrate multiplex transmission including use of full and half duplex communications.

03.04 Describe gain and loss concepts as applied to transmission and distribution systems.

04.0	Demonstrate proficiency in network communications – the student will be able to:
04.01	Fabricate and test LAN cabling.
05.0	Demonstrate proficiency in the analysis of telephony communication systems – the student will be able to:
05.01	Describe the general characteristics of a telephone subscriber loop.
05.02	Terminate and test telephony cable.
06.0	Demonstrate proficiency in the analysis of analog and digital video systems – the student will be able to:
06.01	Assemble and test cables and connectors related to video/audio 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.

Career and Technical Student Organization (CTSO)

SkillsUSA is the intercurricular career and technical student organization(s) 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.

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: Interactive Media Support
Career Cluster: Arts, A/V Technology and Communication

CCC	
CIP Number	0650010203
Program Type	College Credit Certificate (CCC)
Program Length	15 credit hours
CTSO	SkillsUSA
SOC Codes (all applicable)	27-1024 – Graphic Designers

Purpose

The purpose of this program is to prepare students for initial employment as graphic design assistants or to supplement training for persons previously or currently employed in this occupation.

This certificate program is part of the Graphics Technology AS degree program (1611080300).

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 Arts, A/V Technology and Communication 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 Arts, A/V Technology and Communication career cluster.

The content includes, but is not limited to, communication skills, illustration, design concepts and theory, typography skills, production skills, color theories, utilization of computers to produce electronic content, presentation procedures, and employability skills.

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

Standards

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

- 01.0 Demonstrate effective interpersonal communication skills.
- 02.0 Create raster-based and vector-based visual solutions.
- 03.0 Formulate concepts/theories.
- 04.0 Apply design and color theories.
- 05.0 Demonstrate technical and creative uses of typography.
- 06.0 Demonstrate production skills in web and print design.
- 07.0 Demonstrate knowledge of current industry standards, practices, and techniques.
- 08.0 Apply marketing/advertising principles for effective visual communication.
- 09.0 Demonstrate industry-level presentation techniques.
- 10.0 Utilize computer hardware, software, networks and peripherals for the production of electronic content.
- 11.0 Create electronic interfaces.
- 12.0 Demonstrate employability skills.

Florida Department of Education
Student Performance Standards

Program Title: Interactive Media Support
 CIP Number: 0650010203
 Program Length: 15 credit hours
 SOC Code(s): 27-1024

This certificate program is part of the Graphics Technology AS degree program (1611080300). At the completion of this program, the student will be able to:

01.0 Demonstrate effective interpersonal communication skills – the student will be able to:

01.01 Read and interpret written and oral instructions.

01.02 Prepare written correspondence.

01.03 Demonstrate effective oral communication and presentation skills.

01.04 Present work to an audience.

02.0 Create raster-based and vector-based visual solutions – the student will be able to:

02.01 Demonstrate knowledge of methods and materials.

03.0 Formulate concepts/theories – the student will be able to:

03.01 Solve problems by selecting the appropriate styles or techniques.

03.02 Display creative talent and ingenuity.

03.03 Apply principles of design.

03.04 Demonstrate the design process.

04.0 Apply design and color theories – the student will be able to:

04.01 Create a design utilizing the appropriate technical color application for the intended output.

04.02 Create mockups, dummies, and comprehensive layouts in a variety of formats.

04.03 Evaluate the use of design principles for a variety of graphic design applications.

04.04	Apply knowledge of color theory to design solutions.
04.05	Develop solutions for interactive media that demonstrate awareness of the user experience.
05.0	Demonstrate technical and creative uses of typography – the student will be able to:
05.01	Develop and demonstrate appropriate use of type styles and letter forms.
05.02	Demonstrate application of typographical specifications.
05.03	Apply correct lettering and line spacing for typesetting.
05.04	Develop a working knowledge of type spacing.
05.05	Demonstrate the principles of typography in a design project.
06.0	Demonstrate production skills in web and print design – the student will be able to:
06.01	Size photographs and illustrations.
06.02	Demonstrate correct preparation of electronic files for various printed and electronic outputs.
06.03	Utilize appropriate industry-standard software to execute design solutions.
07.0	Demonstrate knowledge of current industry standards, practices, and techniques – the student will be able to:
07.01	Use industry terminology.
07.02	Identify industry practices and procedures.
07.03	Explain the importance of meeting deadlines.
07.04	Demonstrate the ability to adjust to work conditions.
08.0	Apply marketing/advertising principles for effective visual communication – the student will be able to:
08.01	Identify the target audience.
09.0	Demonstrate industry-level presentation techniques – the student will be able to:
09.01	Prepare an industry-level professional portfolio appropriate for the type of work created.
10.0	Utilize computer hardware, software, networks, and peripherals for the production of electronic content – the student will be able to:
10.01	Demonstrate an understanding of platforms, operating systems, coding languages, hardware, software, peripherals, network issues, and compatibility.

11.0	Create electronic interfaces – the student will be able to:
11.01	Create vector-based or raster-based layouts that appropriately translate to a variety of electronic formats.
11.02	Create interactive content for websites.
12.0	Demonstrate employability skills – the student will be able to:
12.01	Identify acceptable work habits.

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)

SkillsUSA is the intercurricular career and technical student organization(s) 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.

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: Digital Media/Multimedia Web Production
Career Cluster: Arts A/V Technology and Communication

CCC	
CIP Number	0650010208
Program Type	College Credit Certificate (CCC)
Program Length	15 credit hours
CTSO	SkillsUSA
SOC Codes (all applicable)	27-4099 – Media and Communication Equipment Workers, All Other

Purpose

The purpose of this program is to prepare students for initial employment as a web production assistant or a web production artist; this program also provides supplemental training for persons previously or currently employed in these occupations.

This certificate program is part of the Digital Media/Multimedia Technology (60) AS degree program (1611080103).

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.).

The content should include, but not be limited to: analysis of end-user needs, use of digital media/multimedia computer applications, and the design and production of digital media/multimedia projects, including manipulation of video and/or animations and audio

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 Arts, A/V Technology and Communication 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 Arts, A/V Technology and Communication career cluster.

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

Standards

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

- 01.0 Create, alter and/or adjust presentations utilizing a variety of digital media/multimedia technologies.
- 02.0 Design and generate video and/or animations in a multimedia project.
- 03.0 Design and execute audio technology for a digital media/multimedia project.
- 04.0 Use computer applications for digital media/multimedia projects.
- 05.0 Produce digital media/multimedia projects.

Florida Department of Education
Student Performance Standards

Program Title: Digital Media/Multimedia Web Production
CIP Number: 0650010208
Program Length: 15 credit hours
SOC Code(s): 27-4099

This certificate program is part of the Digital Media/Multimedia Technology (60) AS degree program (1611080103). At the completion of this program, the student will be able to:

01.0 Create, alter and/or adjust presentations utilizing a variety of digital media/multimedia technologies – the student will be able to:

01.01 Analyze the strengths and weaknesses of presentational media.

01.02 Demonstrate the ability to locate appropriate production resources.

02.0 Design and generate video and/or animations in a multimedia project – the student will be able to:

02.01 Capture, manipulate and apply a video and/or animation image in a digital media/multimedia project.

02.02 Differentiate and optimize video and/or animation formats.

03.0 Design and execute audio technology for a digital media/multimedia project – the student will be able to:

03.01 Capture, manipulate and apply audio and sound in a digital media/multimedia project.

03.02 Differentiate and optimize formats for audio and sound.

04.0 Use computer applications for digital media/multimedia projects – the student will be able to:

04.01 Design and produce digital media/multimedia content.

04.02 Test, edit and de-bug digital media/multimedia content.

05.0 Produce digital media/multimedia projects – the student will be able to:

05.01 Assess the needs of the end user or client.

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)

SkillsUSA is the intercurricular career and technical student organization(s) 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.

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: Webcast Media
Career Cluster: Arts A/V Technology and Communication

CCC	
CIP Number	0650010215
Program Type	College Credit Certificate (CCC)
Program Length	12 credit hours
CTSO	SkillsUSA
SOC Codes (all applicable)	27-4099 – Media and Communication Equipment Workers, All Other

Purpose

The purpose of this program is to prepare students for employment as webcast production assistants or to provide supplemental training for persons previously or currently employed in these occupations.

This certificate program is part of the Digital Television and Media Production (60) AS degree program (1609070213).

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.).

The content includes, but is not limited to, television, broadcast, video, design and Internet media training. This program focuses on broad transferable skills and stresses understanding and demonstration of the following elements of the television video and Internet/webcast industries: working as part of a team, safe and efficient work practices, use of lighting equipment, organization and editing of video resources, and design and generation of graphic elements.

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 Arts, A/V Technology and Communication 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 Arts, A/V Technology and Communication career cluster.

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

Standards

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

- 01.0 Demonstrate the ability to collaborate with others.
- 02.0 Demonstrate safe and efficient work practices.
- 03.0 Create appropriate lighting for location and/or set productions.
- 04.0 Operate studio and field video cameras.
- 05.0 Record, mix and edit audio resources.
- 06.0 Organize and edit video resources.
- 07.0 Design and generate graphic elements.

Florida Department of Education
Student Performance Standards

Program Title: Webcast Media
 CIP Number: 0650010215
 Program Length: 12 credit hours
 SOC Code(s): 27-4099

This certificate program is part of the Digital Television and Media Production (60) AS degree program (1609070213). At the completion of this program, the student will be able to:

01.0 Demonstrate the ability to collaborate with others – the student will be able to:

01.01 Demonstrate the ability to work as part of a team.

02.0 Demonstrate safe and efficient work practices – the student will be able to:

02.01 Follow industry safety rules, regulations and policies.

02.02 Demonstrate proper handling of hazardous materials.

02.03 Demonstrate awareness of appropriate ergonomics.

02.04 Demonstrate the proper care and use of equipment.

03.0 Create appropriate lighting for location and/or set productions – the student will be able to:

03.01 Determine appropriate lighting needs for production settings.

03.02 Use lighting equipment according to industry safety standards.

04.0 Operate studio and field video cameras – the student will be able to:

04.01 Plan a shot to obtain the required action/footage.

04.02 Demonstrate appropriate shot sequences, transitions and post-production (editing) effects.

04.03 Perform appropriate pre-production checks of equipment function.

04.04 Define the various recording formats and media.

04.05 Define appropriate digital compression and signal (file) types.

05.0	Record, mix and edit audio resources – the student will be able to:
05.01	Set up audio recording equipment.
05.02	Establish appropriate recording conditions.
05.03	Perform appropriate pre-production checks of production equipment.
06.0	Organize and edit video resources – the student will be able to:
06.01	Log and organize video resources.
06.02	Digitize video resources into post-production equipment and workflow.
07.0	Design and generate graphic elements – the student will be able to:
07.01	Operate graphic production software.
07.02	Produce broadcast graphic elements for titling, credits and graphic transitions.
07.03	Demonstrate an understanding of graphic image types and files.

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)

SkillsUSA is the intercurricular career and technical student organization(s) 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.

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: Webcast Technology
Career Cluster: Arts A/V Technology and Communication

CCC	
CIP Number	0650010218
Program Type	College Credit Certificate (CCC)
Program Length	24 credit hours
CTSO	SkillsUSA
SOC Codes (all applicable)	27-4099 – Media and Communication Equipment Workers, All Other

Purpose

The purpose of this program is to prepare students for employment as webcast production assistants or to provide supplemental training for persons previously or currently employed in these occupations.

This certificate program is part of the Digital Television and Media Production (60) AS degree program (1609070213).

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.).

The content includes, but is not limited to, television, broadcast, video, design and Internet media training. This program focuses on broad transferable skills and stresses understanding and demonstration of the following elements of the television video and Internet/webcast industries: working as part of a team, safe and efficient work practices, use of lighting equipment, operation of video camera, set up and operation of audio recording equipment, design and generation of graphic elements, organization and editing of video resources, and planning, coordination and management of a video or webcast production.

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 Arts, A/V Technology and Communication 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 Arts, A/V Technology and Communication career cluster.

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

Standards

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

- 01.0 Demonstrate the ability to collaborate with others.
- 02.0 Demonstrate safe and efficient work practices.
- 03.0 Generate a production schedule.
- 04.0 Plan a production set.
- 05.0 Create appropriate lighting for location and/or set productions.
- 06.0 Operate studio and field video cameras.
- 07.0 Record, mix and edit audio resources.
- 08.0 Operate control room equipment.
- 09.0 Organize and edit video resources.
- 10.0 Design and generate graphic elements.
- 11.0 Plan, coordinate and manage TV or video-based production.

Florida Department of Education
Student Performance Standards

Program Title: Webcast Technology
 CIP Number: 0650010218
 Program Length: 24 credit hours
 SOC Code(s): 27-4099

This certificate program is part of the Digital Television and Media Production (60) AS degree program (1609070213). At the completion of this program, the student will be able to:

01.0 Demonstrate the ability to collaborate with others – the student will be able to:

01.01 Demonstrate management and leadership abilities.

01.02 Demonstrate the ability to work as part of a team.

02.0 Demonstrate safe and efficient work practices – the student will be able to:

02.01 Follow industry safety rules, regulations and policies.

02.02 Demonstrate proper handling of hazardous materials.

02.03 Demonstrate awareness of appropriate ergonomics.

02.04 Demonstrate the proper care and use of equipment.

03.0 Generate a production schedule – the student will be able to:

03.01 Define the segment or program type.

04.0 Plan a production set – the student will be able to:

04.01 Define set requirements for specific program type.

05.0 Create appropriate lighting for location and/or set productions – the student will be able to:

05.01 Determine appropriate lighting needs for production settings.

05.02 Identify locations and studio lighting types, methods of use and application.

05.03 Use lighting equipment according to industry safety standards.

06.0	Operate studio and field video cameras – the student will be able to:
06.01	Use current industry standard video production equipment.
06.02	Operate a camera in studio and location (field) production environments.
06.03	Plan a shot to obtain the required action/footage.
06.04	Demonstrate appropriate shot sequences, transitions and post-production (editing) effects.
06.05	Control camera movement to obtain the required effects.
06.06	Control lens, focal length, aperture and exposure to obtain required effects.
06.07	Set up the camera and recording equipment sequence.
06.08	Perform appropriate pre-production checks of equipment function.
06.09	Define the various recording formats and media.
06.10	Define appropriate digital compression and signal (file) types.
07.0	Record, mix and edit audio resources – the student will be able to:
07.01	Identify and select microphones for production needs.
07.02	Determine optimal microphone placement.
07.03	Set up audio recording equipment.
07.04	Establish appropriate recording conditions.
07.05	Perform appropriate pre-production check of production equipment.
07.06	Perform sound edits and enhancements.
07.07	Record location sound.
07.08	Record studio live sound.
08.0	Operate control room equipment – the student will be able to:
08.01	Define control room functions in a production.
08.02	Use the audio console (mixer) in a production.

09.0	Organize and edit video resources – the student will be able to:
09.01	Log and organize video resources.
09.02	Operate editing hardware and software.
09.03	Digitize video resources into post-production equipment and workflow.
10.0	Design and generate graphic elements – the student will be able to:
10.01	Determine the graphic requirements for a production.
10.02	Operate graphic production software.
10.03	Produce broadcast graphic elements for titling, credits and graphic transitions.
10.04	Generate appropriate special effects for a production.
10.05	Demonstrate an understanding of graphic image types and files.
10.06	Use image-editing software.
11.0	Plan, coordinate, and manage a TV or video-based production – the student will be able to:
11.01	Define the program/segment format and market.
11.02	Develop a production schedule.
11.03	Direct final production values.
11.04	Archive and manage finished assets and originals.
11.05	Oversee broadcast/distribution to market.
11.06	Explain the techniques and procedures of web hosts, portals, television broadcast and cable networks, syndication and public broadcasters.

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)

SkillsUSA is the intercurricular career and technical student organization(s) 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.

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: Stage Technology
Career Cluster: Arts, A/V Technology and Communication

CCC	
CIP Number	0650050201
Program Type	College Credit Certificate (CCC)
Program Length	17 credit hours
CTSO	SkillsUSA
SOC Codes (all applicable)	27-4099 – Media and Communication Equipment Workers, All Other

Purpose

The purpose of this program is to provide students with the foundational skills required for initial employment in the live entertainment industry.

This certificate program is part of the Theater and Entertainment Technology AS degree program (1650050202).

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 Arts, A/V Technology and Communication 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 Arts, A/V Technology and Communication career cluster.

The content should include, but not be limited to, stagecraft, lighting, and sound production for theatrical/entertainment productions.

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

Standards

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

- 01.0 Construct and install scenery to the specifications required in a scene design.
- 02.0 Perform the duties of a stage hand.
- 03.0 Install and operate sound equipment for performance.
- 04.0 Hang circuit and focus stage lights to the specifications required in a lighting design.
- 05.0 Perform the duties of a light board operator and follow spot operator.
- 06.0 Function as part of a technical team in planning, implementing, and running the technical aspects of theatrical/entertainment productions.

Florida Department of Education
Student Performance Standards

Program Title: Stage Technology
 CIP Number: 0650050201
 Program Length: 17 credit hours
 SOC Code(s): 27-4099

This certificate program is part of the Theater and Entertainment Technology AS degree program (1650050202). At the completion of this program, the student will be able to:

01.0 Construct and install scenery to the specifications required in a scene design – the student will be able to:

01.01 Use hand and power tools commonly found in scene shops.

01.02 Choose the appropriate materials and hardware for scenic construction.

01.03 Construct common two-dimensional scenery.

01.04 Construct common three-dimensional scenery.

01.05 Demonstrate application techniques used in painting scenery.

01.06 Construct properties and mechanical special effects.

02.0 Perform the duties of a stage hand – the student will be able to:

02.01 Operate equipment commonly found in performance venues.

02.02 Determine methods for scenery repair within a limited time frame.

02.03 Assume crew chief responsibilities.

02.04 Perform all duties in a disciplined manner as required by the demands of performance.

03.0 Install and operate sound equipment for performance – the student will be able to:

03.01 Identify sound equipment used in productions.

03.02 Assemble various components to develop an audio recording or reinforcement system.

03.03 Install a sound system resulting in optimal performance and safety of the equipment.

03.04	Operate sound equipment in both record and playback mode.
04.0	Hang circuit and focus stage lights to the specifications required in a lighting design – the student will be able to:
04.01	Read a standard lighting plot.
04.02	Read a standard instrument schedule.
04.03	Identify stage lighting equipment.
04.04	Hang and circuit lights for a stage production.
04.05	Focus lights for a stage production.
05.0	Perform the duties of a light board operator and follow spot operator – the student will be able to:
05.01	Program and execute cues on a computerized lighting console in both rehearsal and performance.
05.02	Execute cues using a follow spot in rehearsal and performance.
06.0	Function as part of a technical team in planning, implementing and running the technical aspects of theatrical/entertainment productions – the student will be able to:
06.01	Perform as a member of a team within the framework of an organized production.
06.02	Schedule job assignments in order to meet production deadlines.
06.03	Apply accepted principles of theater technology to production situations.
06.04	Adapt learned skills and generate new approaches to solve unique production problems.

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)

SkillsUSA is the intercurricular career and technical student organization(s) 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.

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: Film Production Fundamentals
Career Cluster: Arts A/V Technology and Communication

CCC	
CIP Number	0650060203
Program Type	College Credit Certificate (CCC)
Program Length	24 credit hours
CTSO	SkillsUSA
SOC Codes (all applicable)	27-4099 – Media and Communication Equipment Workers, All Other

Purpose

The purpose of this program is to prepare students for initial employment as an assistant camera operator, set decorator, prop master, assistant editor, boom operator, audio utility, electrician and grip, or to provide supplemental training for persons previously or currently employed in these occupations. The content should include, but not be limited to, instruction that prepares students to function as part of a team on film/video productions.

This certificate program is part of the Film Production Technology AS degree program (1650060213).

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 Arts, A/V Technology and Communication 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 Arts, A/V Technology and Communication career cluster.

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

Standards

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

01.0 Function as part of a team on film/video productions.

Florida Department of Education
Student Performance Standards

Program Title: Film Production Fundamentals
 CIP Number: 0650060203
 Program Length: 24 credits hours
 SOC Code(s): 27-4099

This certificate program is part of the Film Production Technology AS degree program (1650060213). At the completion of this program, the student will be able to:

01.0	Function as part of a team on film/video productions – the student will be able to:
01.01	Differentiate the working relationships that exist between the various participants involved in the film-making process.
01.02	Perform as a member of a technical team within the framework of an organized theater/film production.
01.03	Adapt learned skills and generate new approaches in order to solve unique production problems.
01.04	Demonstrate the proper use of standard film making forms.
01.05	Define the specific technical processes used by the camera, grip, lighting, sound, art, costume, special effects, make-up and editing departments.
01.06	Compare the techniques used in film and video production.
01.07	Manage resources and personnel in order to meet production deadlines.
01.08	Analyze job needs and perform transactions with rental houses and suppliers.
01.09	Apply accepted principles of film technology to production situation(s).
01.10	Interpret a film script and storyboard for production requirements.
01.11	Develop appropriate industry contacts.
01.12	Formulate and implement a production plan in the areas of sync sound, camera, grip, electrical, sound, art direction, post-production, special effects, wardrobe, make-up, assistant direction, casting, script supervision and production 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.

Career and Technical Student Organization (CTSO)

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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: Motion Picture Production
Career Cluster: Arts A/V Technology and Communication

CCC	
CIP Number	0650060204
Program Type	College Credit Certificate (CCC)
Program Length	16 credit hours
CTSO	SkillsUSA
SOC Codes (all applicable)	27-4099 – Media and Communication Equipment Workers, All Other

Purpose

The purpose of this program is to prepare students for initial employment as a production assistant, lighting assistant, gripping assistant, audio assistant, camera assistant, or to provide supplemental training for persons previously or currently employed in these occupations. The content should include, but not be limited to, instruction that prepares individuals to function as members of a technical team within the framework of an organized film/video production. Instruction includes: scenery design, audio recording and playback, stage lighting, gripping, camera, and lighting.

This certificate program is part of the Film Production Technology AS degree program (1650060213).

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 Arts, A/V Technology and Communication 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 Arts, A/V Technology and Communication career cluster.

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

Standards

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

- 01.0 Formulate strategies for audio recording and playback for film/video productions.
- 02.0 Synchronize dailies.
- 03.0 Supervise the hanging, focusing and circuiting of stage lights to the specifications required in lighting designs.
- 04.0 Function as part of a team on film/video productions.
- 05.0 Analyze and implement tasks for gripping.
- 06.0 Interpret and implement the audio requirements for film production.
- 07.0 Analyze and execute tasks for camera operations.
- 08.0 Analyze and execute tasks for film/video editing.
- 09.0 Analyze and execute tasks for film lighting.
- 10.0 Demonstrate employability skills.

Florida Department of Education
Student Performance Standards

Program Title: Motion Picture Production
 CIP Number: 0650060204
 Program Length: 16 credit hours
 SOC Code(s): 27-4099

This certificate program is part of the Film Production Technology AS degree program (1650060213). At the completion of this program, the student will be able to:

01.0	Formulate strategies for audio recording and playback for film/video productions – the student will be able to:
01.01	Demonstrate use of microphones, recorders, speakers, mixers, boom poles, and other recording and playback equipment.
01.02	Demonstrate basic knowledge of acoustics.
01.03	Evaluate recording needs.
01.04	Evaluate technical resources as appropriate to given spaces.
01.05	Configure and operate sound recording and playback systems to meet performance needs.
01.06	Analyze various audio qualities to achieve proper sound mix on an audio mixer.
01.07	Design a plot for proper microphone and speaker placement.
02.0	Synchronize dailies – the student will be able to:
02.01	Transfer location sound from location recording format to display format.
02.02	Synchronize sound element to picture element.
02.03	Demonstrate basic sound editing skills (manually or electronically).
03.0	Supervise the hanging, focusing and circuiting of stage lights to the specifications required in lighting designs – the student will be able to:
03.01	Demonstrate fundamental electrical skills (e.g., switches, circuits, Ohm’s law).
03.02	Demonstrate understanding of quality, physics, and color temperature of light.
03.03	Demonstrate understanding of lighting styles and techniques.

03.04	Demonstrate safe work habits.
03.05	Design a standard lighting plot.
03.06	Analyze and document lighting, electrical, and crew requirements for production.
03.07	Supervise hanging, circuiting and focusing lights for a production.
03.08	Manage lighting area operations.
04.0	Function as part of a team on film/video productions – the student will be able to:
04.01	Differentiate the working relationships that exist among the various participants involved in the film making process.
04.02	Perform as a member of a technical team within the framework of an organized theater/film production.
04.03	Adapt learned skills and generate new approaches in order to solve unique production problems.
04.04	Demonstrate the proper use of standard film making forms.
04.05	Define the specific technical processes used by the camera, grip, lighting, sound, art, costume, special effects, make-up and editing departments.
04.06	Compare the techniques used in film and video production.
04.07	Manage resources and personnel in order to meet production deadlines.
04.08	Analyze job needs and perform transactions with rental houses and suppliers.
04.09	Apply accepted principles of film technology to production situations.
04.10	Interpret a film script and storyboard for their production requirements.
04.11	Develop appropriate industry contacts.
04.12	Formulate and implement a production plan in the areas of sync sound, camera, grip, electrical, sound, art direction, post-production, special effects, wardrobe, make-up, assistant direction, casting, script supervision and production management.
05.0	Analyze and implement tasks for gripping – the student will be able to:
05.01	Formulate strategies to properly utilize grip equipment during film/video production.
05.02	Translate script needs into creative uses of dollies, cranes and other camera mounts as required for film and video production.
05.03	Originate solutions to unique shooting problems.
05.04	Organize production routines.

05.05	Analyze a script for its technical requirements.
05.06	Work as a member of a film production team.
05.07	Develop appropriate industry contacts.
05.08	Demonstrate safe work habits.
05.09	Analyze production requirements to determine grip equipment needs.
05.10	Create required effects for lighting set-ups.
05.11	Demonstrate proper and safe use of equipment.
05.12	Appraise maintenance needs for gripping equipment (dollies, cranes, etc.).
06.0	Interpret and implement the audio requirements for film production – the student will be able to:
06.01	Formulate sound design for required sound effects and dialogue replacement to complete motion picture soundtrack.
06.02	Augment picture soundtrack with pre-recorded score from various sources.
06.03	Record dialogue replacement lines.
06.04	Record live sound effects.
06.05	Edit and synchronize pre-recorded sound effects from pre-recorded source in sync to picture.
06.06	Evaluate and edit production dialogue track.
06.07	Mix multiple tracks of dialogue, sound effects, and music into a finished soundtrack according to industry quality standards.
06.08	Playback/synchronize finished soundtrack to finished picture track.
07.0	Analyze and execute tasks for camera operations – the student will be able to:
07.01	Demonstrate knowledge of mechanics and parts of a camera (e.g., shutter, f/stops, lenses).
07.02	Analyze the aesthetic needs of a shot and accomplish them by using standard industry camera equipment.
07.03	Interpret shooting activities required for appropriate camera department documentation.
07.04	Organize the proper care and handling of camera and camera support equipment.
07.05	Analyze the script for camera lens and shot requirements.

07.06	Organize production routines for film camera operation.
07.07	Demonstrate understanding of different responsibilities within the camera department.
07.08	Develop appropriate industry contacts.
07.09	Analyze production requirements to determine camera equipment needs.
07.10	Demonstrate knowledge of camera blocking and screen direction.
08.0	Analyze and execute tasks for film/video editing – the student will be able to:
08.01	Interpret various production documentation related to editing (e.g., script notes, camera notes, sound reports, lined script, continuity reports).
08.02	Demonstrate understanding of organizing, archiving and cataloguing film and tape media.
09.0	Analyze and execute tasks for film lighting – the student will be able to:
09.01	Organize production routines necessary for the lighting department.
09.02	Work as a member of a film production team.
09.03	Create a safe working environment.
09.04	Develop appropriate industry contacts.
10.0	Demonstrate employability skills – the student will be able to:
10.01	Identify acceptable work habits.

Additional Information

Laboratory Activities

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